API Well Number: 43047545860000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐

APPLICATION FOR PERMIT TO DRILL

1. WELL NAME and NUMBER
NBU 921-19H1BS

2. TYPE OF WORK
DRILL NEW WELL ◉ REENTER P&A WELL ○ DEEPEN WELL ○

3. FIELD OR WILDCAT
NATURAL BUTTES

4. TYPE OF WELL
Gas Well Coalbed Methane Well: NO

5. UNIT or COMMUNITIZATION AGREEMENT NAME
NATURAL BUTTES

6. NAME OF OPERATOR
KERR-MCGEE OIL & GAS ONSHORE, L.P.

7. OPERATOR PHONE
720 929-6100

8. ADDRESS OF OPERATOR
P.O. Box 173779, Denver, CO, 80217

9. OPERATOR E-MAIL
Andy.Lytle@anadarko.com

10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)
UTU 0581

11. MINERAL OWNERSHIP
FEDERAL ◉ INDIAN ○ STATE ○ FEE ○

12. SURFACE OWNERSHIP
FEDERAL ○ INDIAN ◉ STATE ○ FEE ○

13. NAME OF SURFACE OWNER (if box 12 = 'fee')

14. SURFACE OWNER PHONE (if box 12 = 'fee')

15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')

16. SURFACE OWNER E-MAIL (if box 12 = 'fee')

17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')
UTE TRIBE

18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS
YES ◉ (Submit Commingling Application) NO ○

19. SLANT
VERTICAL ○ DIRECTIONAL ◉ HORIZONTAL ○

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	789 FNL 771 FEL	NENE	19	9.0 S	21.0 E	S
Top of Uppermost Producing Zone	1408 FNL 533 FEL	SENE	19	9.0 S	21.0 E	S
At Total Depth	1408 FNL 533 FEL	SENE	19	9.0 S	21.0 E	S

21. COUNTY
UINTAH

22. DISTANCE TO NEAREST LEASE LINE (Feet)
533

23. NUMBER OF ACRES IN DRILLING UNIT
2400

25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)
333

26. PROPOSED DEPTH
MD: 11482 TVD: 11412

27. ELEVATION - GROUND LEVEL
4855

28. BOND NUMBER
WYB000291

29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE
43-8496

Hole, Casing, and Cement Information

String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Surf	11	8.625	0 - 2910	28.0	J-55 LT&C	0.2	Type V	180	1.15	15.8
							Class G	270	1.15	15.8
Prod	7.875	4.5	0 - 11482	11.6	HCP-110 LT&C	12.5	Premium Lite High Strength	360	3.38	12.0
							50/50 Poz	1630	1.31	14.3

ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES

- ☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
- ☑ COMPLETE DRILLING PLAN
- ☐ AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)
- ☐ FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
- ☑ DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)
- ☑ TOPOGRAPHICAL MAP

NAME Joel Malefyt | **TITLE** Regualtory Analyst | **PHONE** 720 929-6828

SIGNATURE | **DATE** 07/10/2014 | **EMAIL** joel.malefyt@anadarko.com

API NUMBER ASSIGNED
43047545860000

APPROVAL

Permit Manager

RECEIVED: August 04, 2014

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 921-19H1BS

Surface:	789 FNL / 771 FEL	NENE
BHL:	1408 FNL / 533 FEL	SENE

Section 19 T9S R21E

Unitah County, Utah
Mineral Lease: UTU 0581

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. & 2.a **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Formation	Depth	Resource
Uinta	0 - Surface	
Green River	1,719'	
Birds Nest	1,966'	Water
Mahogany	2,462'	Water
Wasatch	5,066'	Gas
Mesaverde	8,104'	Gas
Sego	10,383'	Gas
Castlegate	10,468'	Gas
Blackhawk	10,812'	Gas
TVD =	11,412'	
TD =	11,482'	

2.b Kerr McGee Oil & Gas Onshore LP (Kerr McGee) may elect to drill to (i) the Blackhawk formation (part of the Mesaverde Group), (ii) to a shallower depth within the Mesaverde Group, or (iii) to the Wasatch Formation. If Kerr McGee drills to the Blackhawk formation, please refer to Blackhawk as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr-McGee drills to a shallower depth in the Mesaverde Group or to the Wasatch Formation, please refer to the attached Wasatch/Mesaverde Drilling Program which includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the shallower formations.

3. **Pressure Control Equipment**

Please refer to the Standard Operating Practices on file with the BLM Vernal Field Office.

RECEIVED: July 07, 2014

4. Proposed Casing & Cementing Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

5. Drilling Fluids Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

6. Evaluation Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

7. Abnormal Conditions:

7.a Blackhawk (Part of Mesaverde Group)

Maximum anticipated bottom hole pressure calculated at 11412' TVD, approximately equals 7,304 psi (0.64 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,777 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

7.b Wasach Formation/Mesaverde Group

Maximum anticipated bottom hole pressure calculated at 10383' TVD, approximately equals 6,334 psi (0.61 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,077 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the Standard Operating Practices on file with the BLM Vernal Field Office.

10. Other Information:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

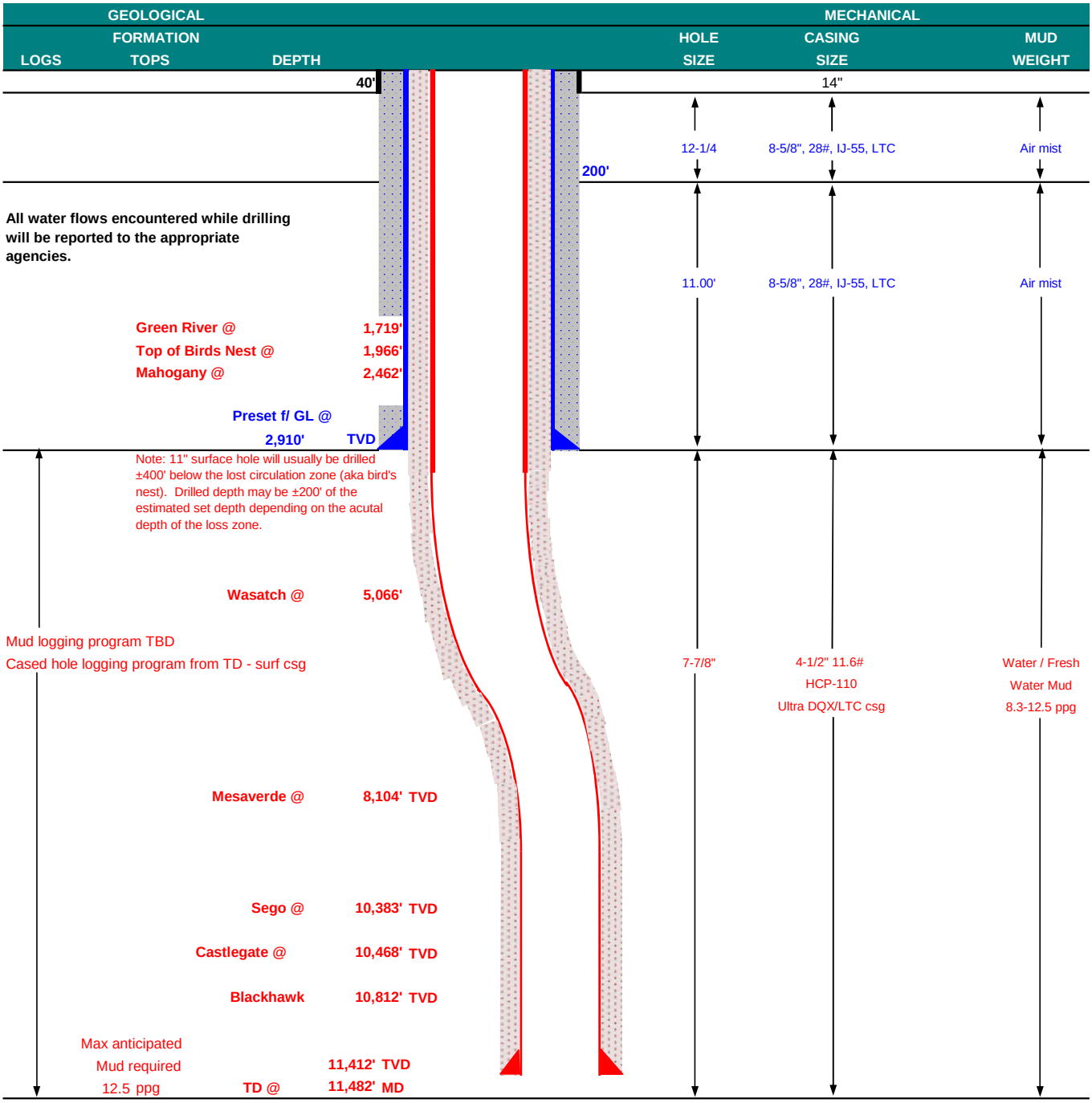
RECEIVED: July 07, 2014

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

Blackhawk Drilling Program

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP			DATE	November 20, 2013
WELL NAME	NBU 921-19H1BS			TD	11,412' TVD 11,482' MD
FIELD	Natural Buttes	COUNTY Uintah	STATE Utah	FINISHED ELEVATION	4,855'
SURFACE LOCATION	NENE	789 FNL	771 FEL	Sec 19 T 9S	R 21E
	Latitude:	40.026671	Longitude:	-109.587779	NAD 83
BTM HOLE LOCATION	SENE	1408 FNL	533 FEL	Sec 19 T 9S	R 21E
	Latitude:	40.025008	Longitude:	-109.586235	NAD 83
OBJECTIVE ZONE(S)	BLACKHAWK (Part of the Mesaverde Group)				
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), TRIBAL (Surface), UDOGM Tri-County Health Dept.				



KERR-McGEE OIL & GAS ONSHORE LP

Blackhawk Drilling Program

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION LTC	TENSION DQX
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,910	28.00	IJ-55	LTC	1.85	1.38	4.88	N/A
								10,690	8,650	279,000	367,174
PRODUCTION	4-1/2"	0	to	5,000	11.60	HCP-110	DQX	1.19	1.17		3.41
	4-1/2"	5,000	to	11,482'	11.60	HCP-110	LTC	1.19	1.17	4.59	

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1			+ 0.25 pps flocele					
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
			+ 2% CaCl + 0.25 pps flocele					
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized						
Option 2	LEAD	2,410'	Premium cmt + 16% Gel + 10 pps gilsonite	290	35%	12.00		2.86
			+ 0.25 pps Flocele + 3% salt BWOC + GR 3 pps					
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
			+ 0.25 pps flocele					
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	4,562'	Premium Lite II +0.25 pps celloflake + .4% FL-52	360	35%	12.00		3.38
			+ .3% R-3 + .5 lbs/sk Kol-Seal + 6%Bentonite II +					
			1.2% Sodium Metasilicate + .05 lbs/sk Static Free					
	TAIL	6,920'	50/50 Poz/G + 10% salt + .05 lbs/sk Static Free	1,630	35%	14.30		1.31
			+ 1.2% Sodium Metasilicate + .5 % EC-1					
			+.002 gps FP-6L + 2% Bentonite II					

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

IF extreme mud losses are observed OR cement doesn't reach surface on a well on the pad, a DV Tool may be used. With Cement Baskets above and Below it.

DRILLING ENGINEER: _____ **DATE:** _____

Nick Spence / John Tuckwiller / Brian Cocchiere / Tyler Elliott

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Kenny Gathings / Lovel Young

RECEIVED: July 07, 2014

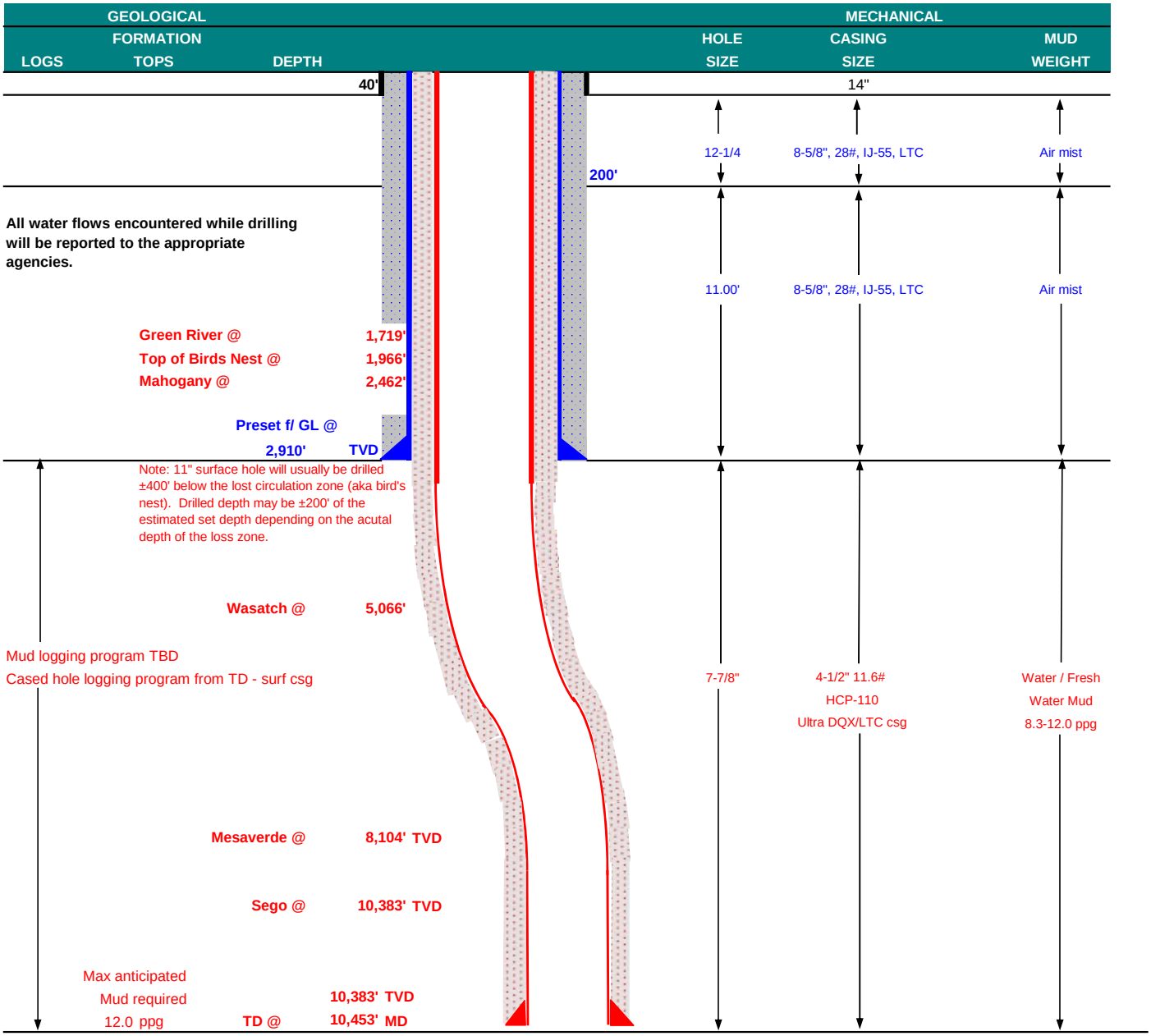
NBU 921-19A PAD

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

Wasatch/Mesaverde Drilling Program

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP			DATE	November 20, 2013
WELL NAME	**NBU 921-19H1BS**			TD	10,383' TVD 10,453' MD
FIELD	Natural Buttes	COUNTY Uintah	STATE Utah		FINISHED ELEVATION 4,855'
SURFACE LOCATION	NENE	789 FNL	771 FEL	Sec 19 T 9S	R 21E
	Latitude: 40.026671	Longitude: -109.587779			NAD 83
BTM HOLE LOCATION	SENE	1408 FNL	533 FEL	Sec 19 T 9S	R 21E
	Latitude: 40.025008	Longitude: -109.586235			NAD 83
OBJECTIVE ZONE(S)	Wasatch Formation/Mesaverde Group				
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), TRIBAL (Surface), UDOGM Tri-County Health Dept.				



RECEIVED: July 07, 2014

NBU 921-19A PAD

KERR-McGEE OIL & GAS ONSHORE LP

Wasatch/Mesaverde Drilling Program

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION LTC	TENSION DQX
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,910	28.00	IJ-55	LTC	1.85	1.38	4.88	N/A
								10,690	8,650		367,174
PRODUCTION	4-1/2"	0	to	5,000	11.60	HCP-110	DQX	1.19	1.34		3.71
								10,690	8,650	279,000	
	4-1/2"	5,000	to	10,453'	11.60	HCP-110	LTC	1.19	1.34	5.40	

Surface Casing:

(Burst Assumptions: TD = 12.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

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CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1			+ 0.25 pps flocele					
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
			+ 2% CaCl + 0.25 pps flocele					
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**					
Option 2	LEAD	2,410'	Premium cmt + 16% Gel + 10 pps gilsonite	290	35%	12.00		2.86
			+ 0.25 pps Flocele + 3% salt BWOC + GR 3 pps					
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
			+ 0.25 pps Flocele + 3% salt BWOC + GR 3 pps					
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	4,563'	Premium Lite II +0.25 pps celloflake + .4% FL-52	360	35%	12.00		3.38
			+ .3% R-3 + .5 lbs/sk Kol-Seal + 6%Bentonite II +					
			1.2% Sodium Metasilicate + .05 lbs/sk Static Free					
	TAIL	5,890'	50/50 Poz/G + 10% salt + .05 lbs/sk Static Free	1,390	35%	14.30		1.31
			+ 1.2% Sodium Metasilicate + .5 % EC-1					
			+.002 gps FP-6L + 2% Bentonite II					

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

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BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

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IF extreme mud losses are observed OR cement doesn't reach surface on a well on the pad, a DV Tool may be used. With Cement Baskets above and Below it.

DRILLING ENGINEER: _____ **DATE:** _____

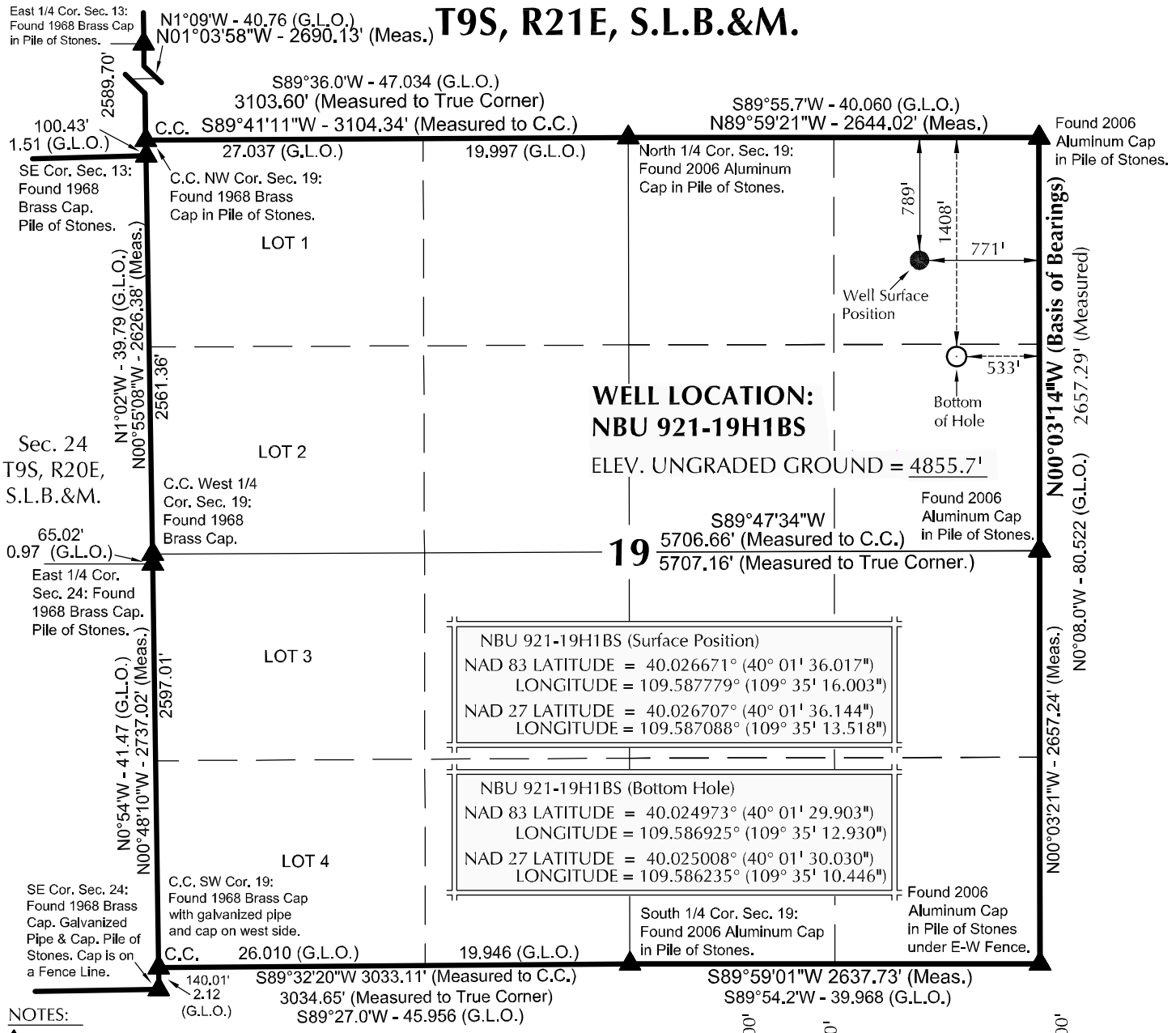
Nick Spence / John Tuckwiller / Brian Cocchiere / Tyler Elliott

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Kenny Gathings / Lovel Young

RECEIVED: July 07, 2014

T9S, R21E, S.L.B.&M.



NOTES:

▲ = Section Corners Located

1. Well footages are measured at right angles to the Section Lines. G.L.O. distances are shown in feet or chains.
2. 1 chain = 66 feet.
3. The Bottom of hole bears S21°02'42"E 663.45' from the Surface Position.
4. NAD 83 Latitude & Longitude are (CORS 96)(EPOCH:2002).
5. Bearings and Distances are based upon a Local Cartesian Grid, oriented to Geodetic North at the North 1/4 Corner of Section 8, T10S, R22E, S.L.B.&M. The Grid having a mean project height of 5300'. Lineal units used are U.S. Survey Foot.
6. Basis of elevation is Tri-Sta "Two Water" located in Lot 4 of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

N

SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

10-2-12

PROFESSIONAL LAND SURVEYOR
REGISTRATION No. 6028691
STATE OF UTAH

No.6028691 JOHN R. SLAUGH — STATE OF UTAH — REGISTERED LAND SURVEYOR

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD: NBU 921-19A

NBU 921-19H1BS
WELL PLAT
1408' FNL, 533' FEL (Bottom Hole)
SE ¼ NE ¼ OF SECTION 19, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

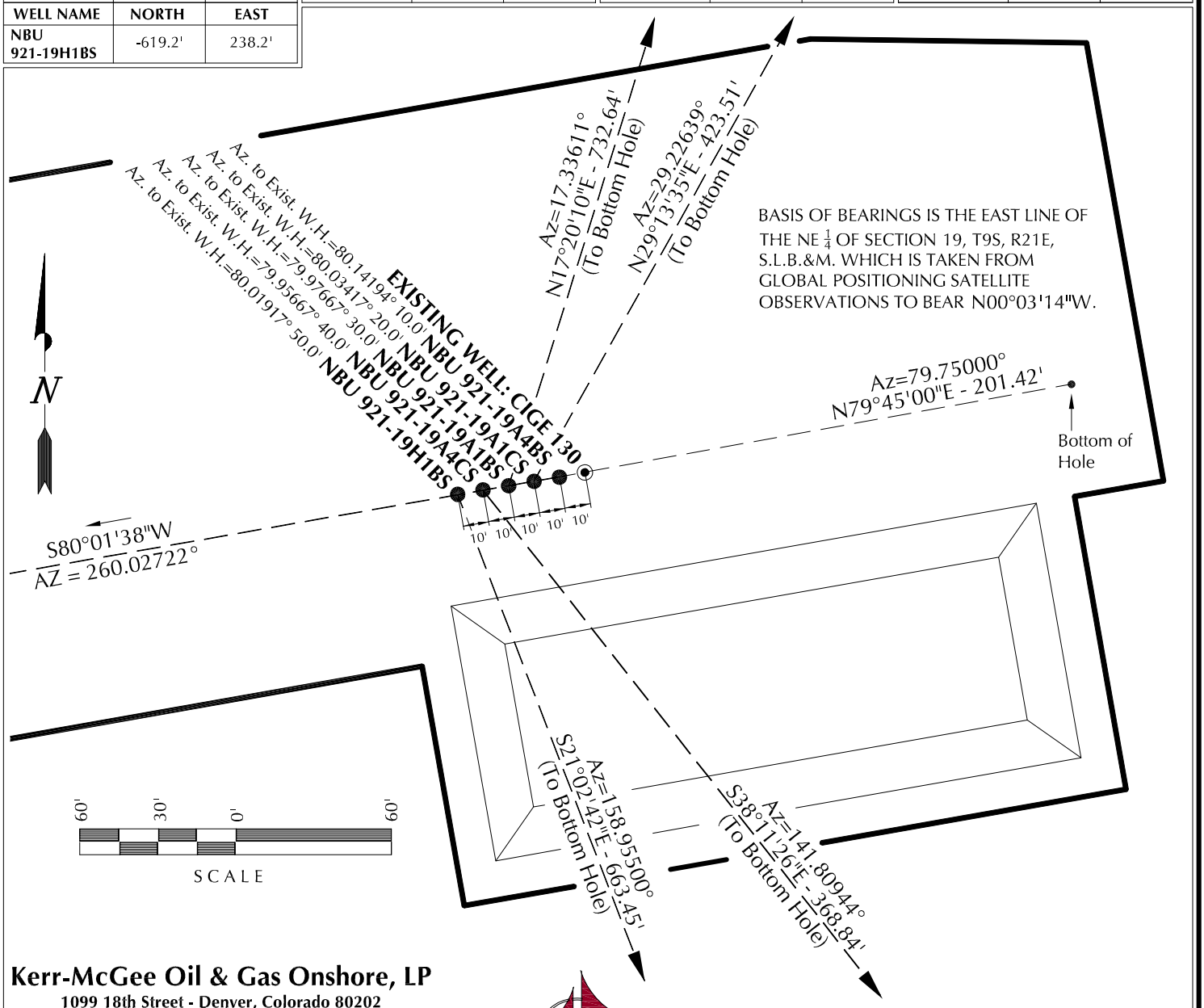
DATE SURVEYED: 9-7-12	SURVEYED BY: J.W.	SHEET NO: 6
DATE DRAWN: 9-18-12	DRAWN BY: T.J.R.	6 OF 18
SCALE: 1" = 1000'	Date Last Revised:	

API Well Number: 43047545860000

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27			NAD83		NAD27		
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES
NBU 921-19A4BS	40°01'36.086" 40.026691°	109°35'15.496" 109.587638°	40°01'36.214" 40.026726°	109°35'13.012" 109.586948°	782' FNL 731' FEL	40°01'36.443" 40.026790°	109°35'12.950" 109.586930°	40°01'36.571" 40.026825°	109°35'10.465" 109.586240°	746' FNL 533' FEL
NBU 921-19A1CS	40°01'36.069" 40.026686°	109°35'15.623" 109.587673°	40°01'36.196" 40.026721°	109°35'13.139" 109.586983°	784' FNL 741' FEL	40°01'39.723" 40.027701°	109°35'12.972" 109.586937°	40°01'39.851" 40.027736°	109°35'10.488" 109.586247°	414' FNL 534' FEL
NBU 921-19A1BS	40°01'36.051" 40.026681°	109°35'15.750" 109.587708°	40°01'36.179" 40.026716°	109°35'13.265" 109.587018°	785' FNL 751' FEL	40°01'42.964" 40.028601°	109°35'12.957" 109.586932°	40°01'43.091" 40.028636°	109°35'10.472" 109.586242°	86' FNL 532' FEL
NBU 921-19A4CS	40°01'36.034" 40.026676°	109°35'15.876" 109.587743°	40°01'36.161" 40.026711°	109°35'13.391" 109.587053°	787' FNL 761' FEL	40°01'33.173" 40.025881°	109°35'12.940" 109.586928°	40°01'33.300" 40.025917°	109°35'10.456" 109.586238°	1077' FNL 533' FEL
NBU 921-19H1BS	40°01'36.017" 40.026671°	109°35'16.003" 109.587779°	40°01'36.144" 40.026707°	109°35'13.518" 109.587088°	789' FNL 771' FEL	40°01'29.903" 40.024973°	109°35'12.930" 109.586925°	40°01'30.030" 40.025008°	109°35'10.446" 109.586235°	1408' FNL 533' FEL
CIGE 130	40°01'36.103" 40.026695°	109°35'15.370" 109.587603°	40°01'36.231" 40.026731°	109°35'12.886" 109.586913°	780' FNL 721' FEL					

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST
NBU 921-19A4BS	35.8'	198.2'
NBU 921-19A1CS	369.6'	206.8'
NBU 921-19A1BS	699.4'	218.3'
NBU 921-19A4CS	-289.9'	228.0'
NBU 921-19H1BS	-619.2'	238.2'



Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-19A

WELL PAD INTERFERENCE PLAT
WELLS - NBU 921-19A4BS, NBU 921-19A1CS, NBU 921-19A1BS, NBU 921-19A4CS & NBU 921-19H1BS
LOCATED IN SECTION 19, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 9-7-12	SURVEYED BY: J.W.	SHEET NO: 6
DATE DRAWN: 9-18-12	DRAWN BY: T.J.R.	6 OF 17
SCALE: 1" = 60'	Date Last Revised: 12-09-13 M.W.W.	

RECEIVED: July 07, 2014

API Well Number: 43047545860000

PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

EXISTING 12" SURFACE GAS PIPELINE

PROPOSED 12" SURFACE GAS PIPELINE RE-ROUTE

PROPOSED 4" SURFACE GAS PIPELINE RE-ROUTE

N29°13'35"E - 423.51' (TO BOTTOM HOLE)

N17°20'10"E - 732.64' (TO BOTTOM HOLE)

N79°45'00"E - 201.42' (TO BOTTOM HOLE)

S38°11'26"E - 368.84' (TO BOTTOM HOLE)

S21°02'42"E - 663.45' (TO BOTTOM HOLE)

EXISTING WELL: CIGE 130
NBU 921-19A4BS
NBU 921-19A1CS
NBU 921-19A1BS
NBU 921-19A4CS
NBU 921-19H1BS

RESERVE PIT 12' DEPTH SLOPE 1.5:1

RECLAIMED PIT

EXISTING TANK AND BERM

EXISTING SEPARATOR

EXISTING METHANOL TANK

BOILER

GENERATOR

DIESEL TANK

MUD PUMP 1

MUD PUMP 2

MUD TANK

SHALE TANK

PIPE RACKS

PIPE TUBS

DERRICK STAND

ANCHOR

EXISTING WELL PAD

CUT

FILL

MOVE EXISTING SPOILS PILE TO PROPOSED LOCATION

RESERVE PIT & EXCESS CUT STOCKPILE

PROPOSED ACCESS ROAD (RE-ROUTE)

TOPSOIL STOCKPILE

EXISTING ACCESS ROAD

BURIED 8" GAS
6" (MAX.) LIQUID

EXISTING 4" SURFACE GAS PIPELINE

EXISTING ACCESS ROAD

WELL PAD - NBU 921-19A DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4855.6'
FINISHED GRADE ELEVATION = 4854.5'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.31 ACRES
TOTAL DISTURBANCE AREA = 4.46 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-19A

WELL PAD - LOCATION LAYOUT
NBU 921-19A4BS,
NBU 921-19A1CS, NBU 921-19A1BS,
NBU 921-19A4CS & NBU 921-19H1BS
LOCATED IN SECTION 19, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 10,773 C.Y.
TOTAL FILL FOR WELL PAD = 9,628 C.Y.
TOPSOIL @ 6" DEPTH = 1,845 C.Y.
EXCESS MATERIAL = 1,145 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
+/- 7,780 C.Y.
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 29,550 BARRELS

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE

HORIZONTAL 0 30' 60' 1" = 60'
2' CONTOURS

TIMBERLINE ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078
(435) 789-1365

SCALE:	1"=60'	DATE:	10/1/12	SHEET NO:
REVISED:		APF 12/17/13		7 7 OF 17

K:\ANADARKO\2012\2012_76_NBU_921-19-30_FOCUS\DWGS\NBU 921-19A\NBU 921-19A.dwg, 12/16/2013 11:29:10 PM, jacob

RECEIVED: July 07, 2014

API Well Number: 43047545860000

PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

EXISTING 12" SURFACE GAS PIPELINE

PROPOSED 12" SURFACE GAS PIPELINE RE-ROUTE

PROPOSED 4" SURFACE GAS PIPELINE RE-ROUTE

N29°13'35"E - 423.51' (TO BOTTOM HOLE)

N17°20'10"E - 732.64' (TO BOTTOM HOLE)

N79°45'00"E - 201.42' (TO BOTTOM HOLE)

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S21°02'42"E - 663.45' (TO BOTTOM HOLE)

EXISTING WELL: CIGE 130
NBU 921-19A4BS 10'
NBU 921-19A1CS 10'
NBU 921-19A1BS 10'
NBU 921-19A4CS 10'
NBU 921-19H1BS 10'

EXISTING TANK AND BERM
EXISTING SEPARATOR
EXISTING METHANOL TANK
BOILER
GENERATOR
DIESEL TANK
MUD PUMP 1
MUD PUMP 2
MUD TANK
SHAKER TANK
CLOSED LOOP EQUIPMENT
PIPE RACKS
PIPE TUBS
DERRICK STAND
ANCHOR

COMPLETIONS PIT (CUTTINGS AREA)
12' DEPTH
SLOPE 1:5:1

RECLAIMED PIT

EXISTING WELL PAD

CUT

FILL

MOVE EXISTING SPOILS PILE TO PROPOSED LOCATION

COMPLETIONS PIT & EXCESS CUT STOCKPILE

PROPOSED ACCESS ROAD (RE-ROUTE)

TOPSOIL STOCKPILE

EXISTING ACCESS ROAD

BURIED 8" GAS
6" (MAX.) LIQUID

EXISTING 4" SURFACE GAS PIPELINE

EXISTING ACCESS ROAD

WELL PAD - NBU 921-19A (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4855.6'
FINISHED GRADE ELEVATION = 4854.5'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.31 ACRES
TOTAL DISTURBANCE AREA = 4.46 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-19A

WELL PAD - LOCATION LAYOUT
NBU 921-19A4BS,
NBU 921-19A1CS, NBU 921-19A1BS,
NBU 921-19A4CS & NBU 921-19H1BS
LOCATED IN SECTION 19, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 10,773 C.Y.
TOTAL FILL FOR WELL PAD = 9,628 C.Y.
TOPSOIL @ 6" DEPTH = 1,845 C.Y.
EXCESS MATERIAL = 1,145 C.Y.

COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT
+/- 5,890 C.Y.
COMPLETIONS PIT CAPACITY
(2' OF FREEBOARD)
+/- 22,110 BARRELS

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE

HORIZONTAL 0 30' 60' 1" = 60'
2' CONTOURS

TIMBERLINE ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078
(435) 789-1365

SCALE: 1"=60'	DATE: 10/1/12	SHEET NO:
REVISED:	APF 12/17/13	7B 7B OF 17

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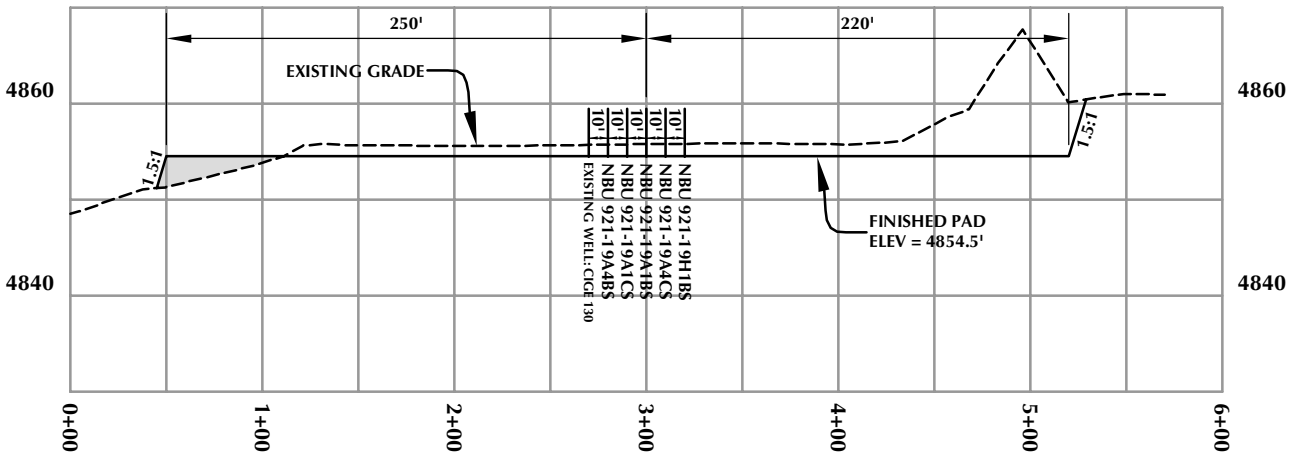
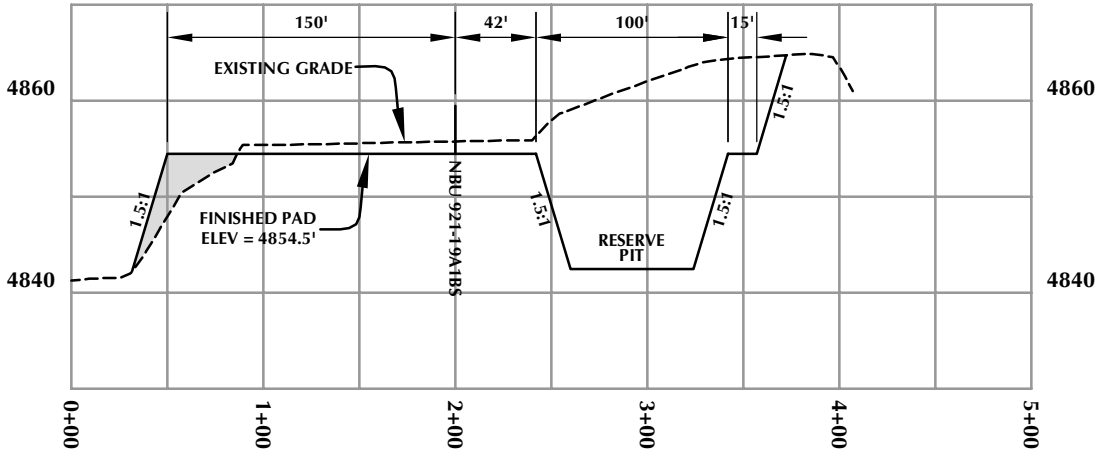
RECEIVED: July 07, 2014



CROSS SECTION A-A'



CROSS SECTION B-B'

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-19A

WELL PAD - CROSS SECTIONS
NBU 921-19A4BS,
NBU 921-19A1CS, NBU 921-19A1BS,
NBU 921-19A4CS & NBU 921-19H1BS
LOCATED IN SECTION 19, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

609
CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

HORIZONTAL 0 50' 100' 1" = 100'
VERTICAL 0 10' 20' 1" = 20'

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

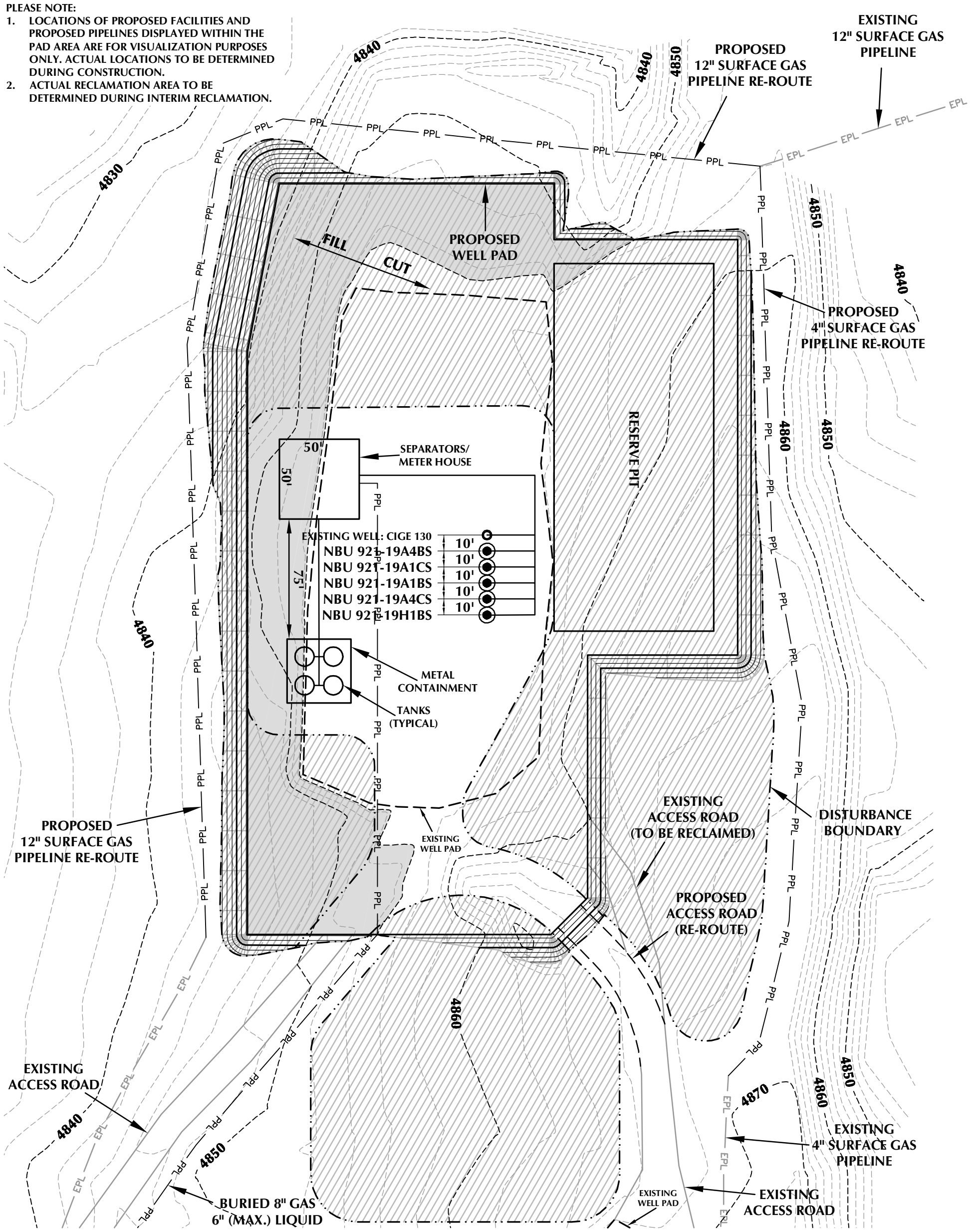
Scale: 1"=100' | Date: 10/1/12 | SHEET NO: 8 8 OF 17
REVISED: APF 12/17/13

K:\ANADARKO\2012\2012_76_NBU_921-19-30_FOCUS\DWGS\NBU 921-19A.dwg, 12/13/2013 4:54:15 PM, andy

API Well Number: 43047545860000

PLEASE NOTE:

1. LOCATIONS OF PROPOSED FACILITIES AND PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.
2. ACTUAL RECLAMATION AREA TO BE DETERMINED DURING INTERIM RECLAMATION.



WELL PAD - NBU 921-19A RECLAMATION DESIGN SUMMARY

TOTAL DISTURBANCE AREA = 4.46 ACRES (INCLUDING EXISTING)
RECLAMATION AREA = 3.35 ACRES
TOTAL WELL PAD AREA AFTER RECLAMATION = 1.11 ACRES

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE
- RECLAMATION AREA

HORIZONTAL 0 30' 60' 1" = 60'
2' CONTOURS

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-19A

WELL PAD - RECLAMATION LAYOUT
NBU 921-19A4BS,
NBU 921-19A1CS, NBU 921-19A1BS,
NBU 921-19A4CS & NBU 921-19H1BS
LOCATED IN SECTION 19, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
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Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

SCALE: 1"=60'	DATE: 10/1/12	SHEET NO: 9
REVISED: APF 12/17/13		9 OF 17

K:\ANADARKO\2012\2012_76_NBU_921-19-30_FOCUS\DWGS\NBU 921-19A\NBU 921-19A.dwg, 12/16/2013 11:29:41 PM, jacob

API Well Number: 43047545860000

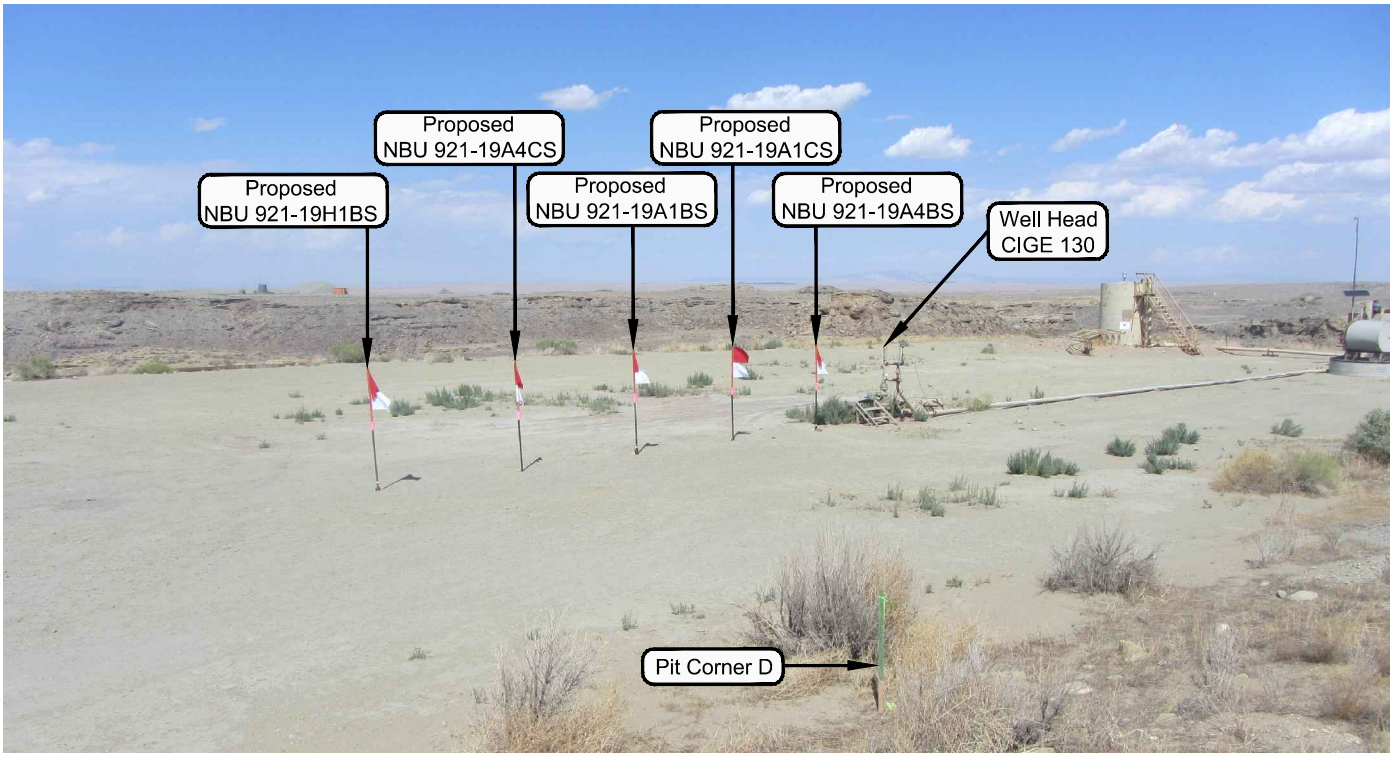

PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE CAMERA ANGLE: NORTHEASTERLY

PHOTO VIEW: FROM EXISTING ACCESS ROAD CAMERA ANGLE: SOUTHEASTERLY

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-19A

LOCATION PHOTOS
NBU 921-19A4BS,
NBU 921-19A1CS, NBU 921-19A1BS,
NBU 921-19A4CS & NBU 921-19H1BS
LOCATED IN SECTION 19, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH.

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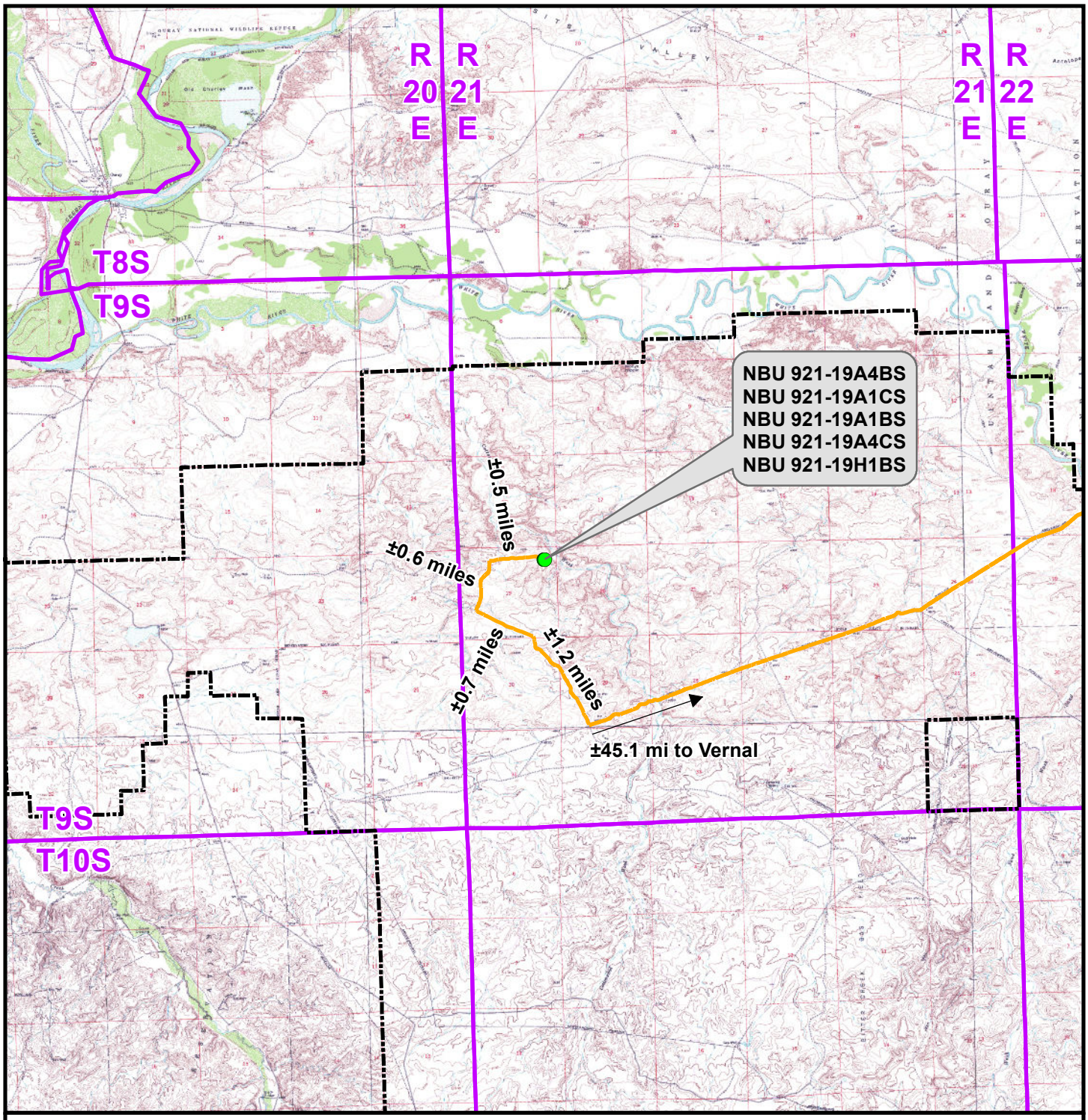
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 9-7-12	PHOTOS TAKEN BY: J.W.	SHEET NO: 10
DATE DRAWN: 9-18-12	DRAWN BY: T.J.R.	10 OF 17
Date Last Revised: 12-09-13 M.W.W.		

RECEIVED: July 07, 2014

API Well Number: 43047545860000



Legend

Distance From Well Pad - NBU 921-19A To Unit Boundary: ±11,343ft

- Proposed Well Location
- Natural Buttes Unit Boundary
- Access Route - Proposed

WELL PAD - NBU 921-19A

TOPO A
NBU 921-19A4BS,
NBU 921-19A1CS, NBU 921-19A1BS,
NBU 921-19A4CS & NBU 921-19H1BS
LOCATED IN SECTION 19, T9S, R21E
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

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Sheridan, Wyoming 82801
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Fax 307-674-0182

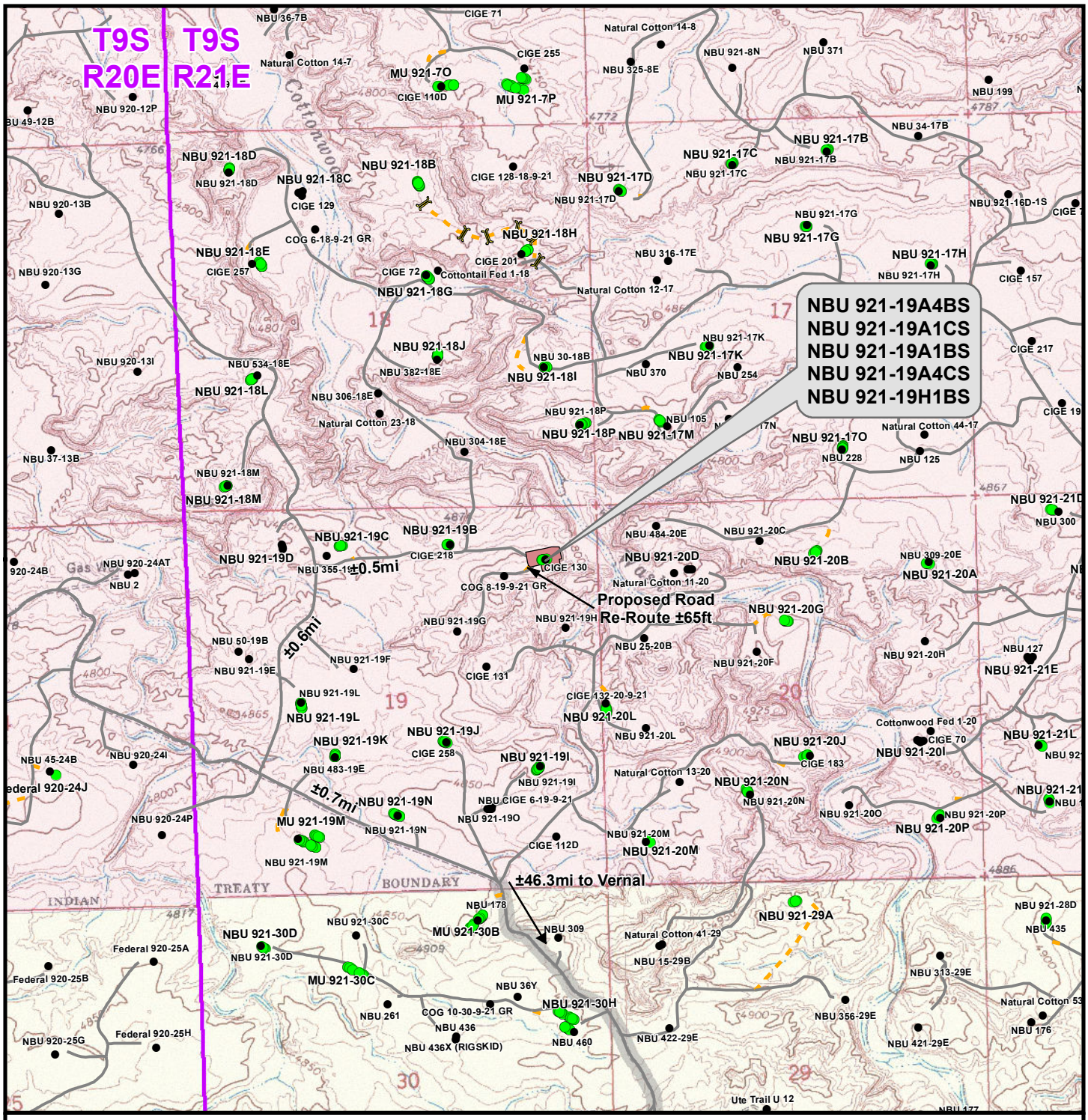
N

SCALE: 1:100,000	NAD83 USP Central	SHEET NO: 11	
DRAWN: TL	DATE: 28 Sep 2012	11 OF 17	
REVISED: TL	DATE: 17 Dec 2013		

File: K:\ANADARKO\2012\2012_76_NBU_921-19-30_FOCUS\GIS\Maps_ABCDE\NBU 921-19A\NBU 921-19A_A.mxd, 10/3/2012 10:50:12 AM

RECEIVED: July 07, 2014

API Well Number: 43047545860000



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WELL PAD - NBU 921-19A

TOPO B
NBU 921-19A4BS,
NBU 921-19A1CS, NBU 921-19A1BS,
NBU 921-19A4CS & NBU 921-19H1BS
LOCATED IN SECTION 19, T9S, R21E
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

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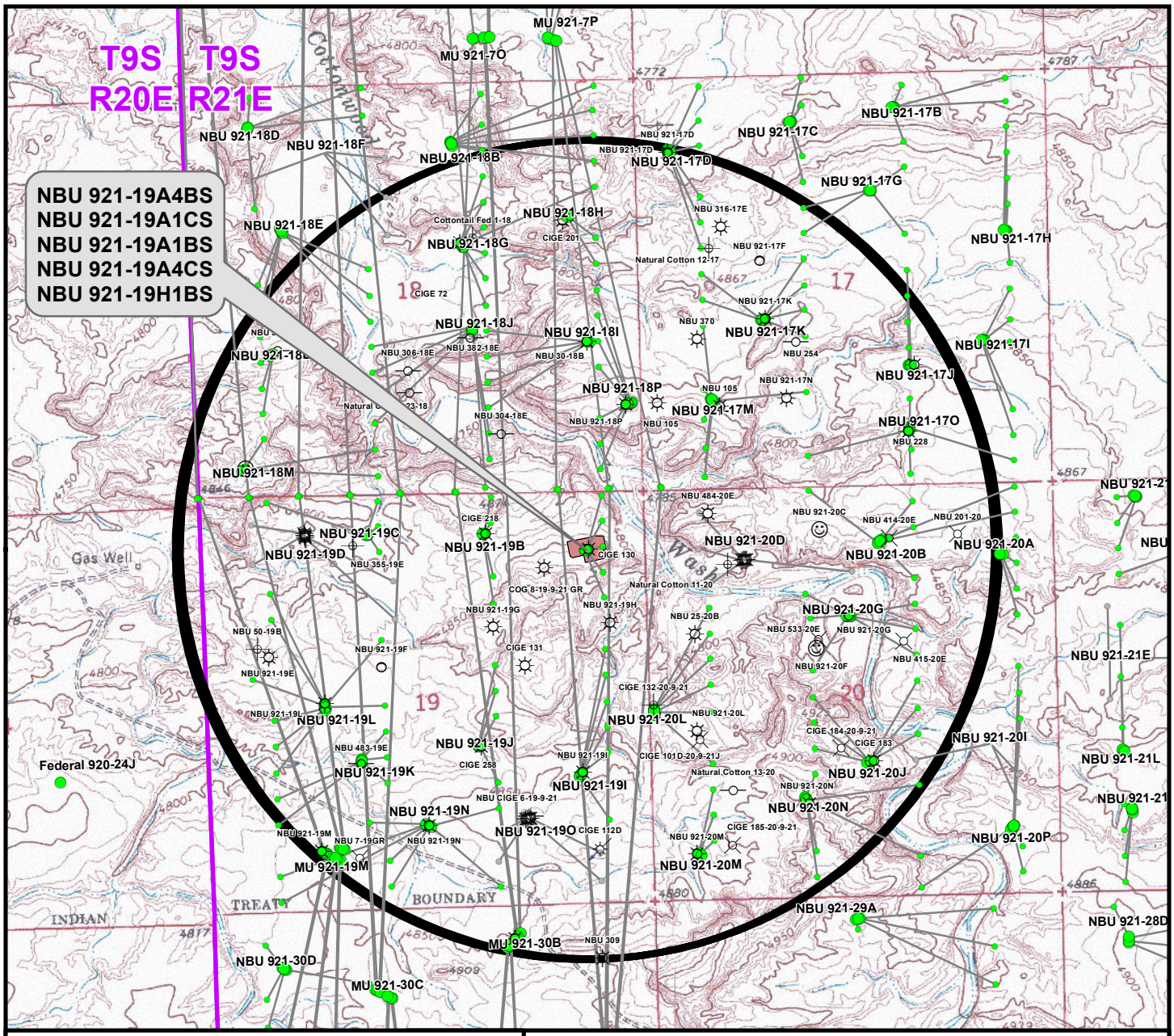
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 12	
DRAWN: TL	DATE: 28 Sep 2012	12 OF 17	
REVISED: TL	DATE: 17 Dec 2013		

RECEIVED: July 07, 2014

API Well Number: 43047545860000



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 921-19A4BS	CIGE 130	191ft
NBU 921-19A1CS	CIGE 130	411ft
NBU 921-19A1BS	CIGE 130	719ft
NBU 921-19A4CS	CIGE 130	352ft
NBU 921-19H1BS	NBU 921-19H	333ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 921-19A

TOPO C
NBU 921-19A4BS,
NBU 921-19A1CS, NBU 921-19A1BS,
NBU 921-19A4CS & NBU 921-19H1BS
LOCATED IN SECTION 19, T9S, R21E
S.L.B.&M., UINTAH COUNTY, UTAH

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Denver, Colorado 80202

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N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 13	13 OF 17
DRAWN: TL	DATE: 28 Sep 2012		
REVISED: TL	DATE: 17 Dec 2013		

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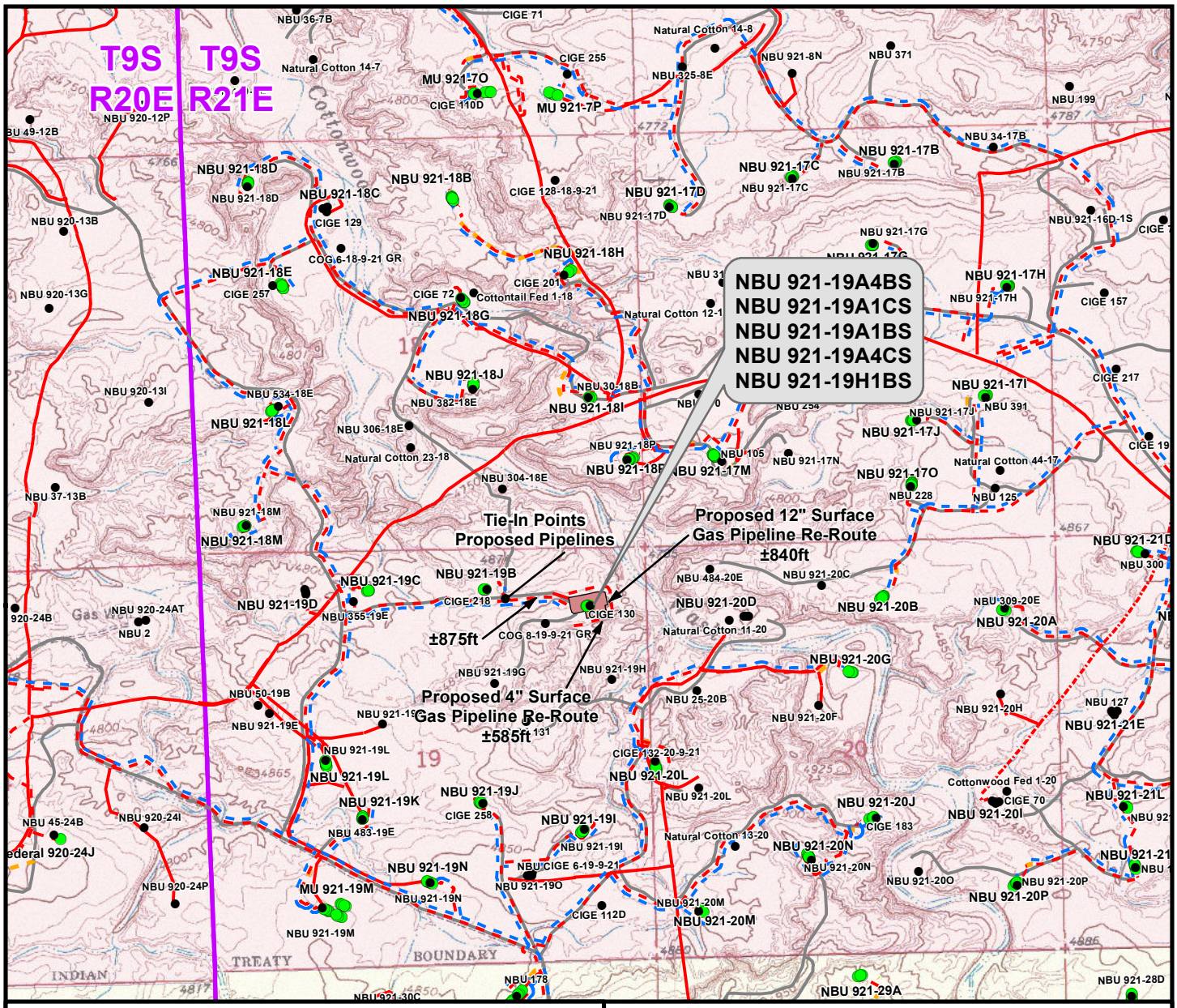
RECEIVED: July 07, 2014

API Well Number: 43047545860000



Proposed Liquid Pipeline	Length
Buried 6" (Max.) (Separator to Edge of Pad)	±295ft
Buried 6" (Max.) (Edge of Pad to 921-19B Intersection)	±875ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±1,170ft

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±295ft
Buried 8" (Edge of Pad to 921-19B Intersection)	±875ft
Surface 12" (Pipeline Re-Route)	±840ft
Surface 4" (Pipeline Re-Route)	±585ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±1,170ft
TOTAL PROPOSED SURFACE GAS PIPELINE =	±1,425ft

Legend

Well - Proposed; Well - Existing; Well Pad; Gas Pipeline - Proposed; Gas Pipeline - To Be Upgraded; Gas Pipeline - Existing; Liquid Pipeline - Proposed; Liquid Pipeline - Existing; Road - Proposed; Road - Existing; Bureau of Land Management; Indian Reservation; State; Private

WELL PAD - NBU 921-19A

TOPO D
NBU 921-19A4BS,
NBU 921-19A1CS, NBU 921-19A1BS,
NBU 921-19A4CS & NBU 921-19H1BS
LOCATED IN SECTION 19, T9S, R21E
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 14	
DRAWN: TL	DATE: 28 Sep 2012	14 OF 17	
REVISED: TL	DATE: 17 Dec 2013		

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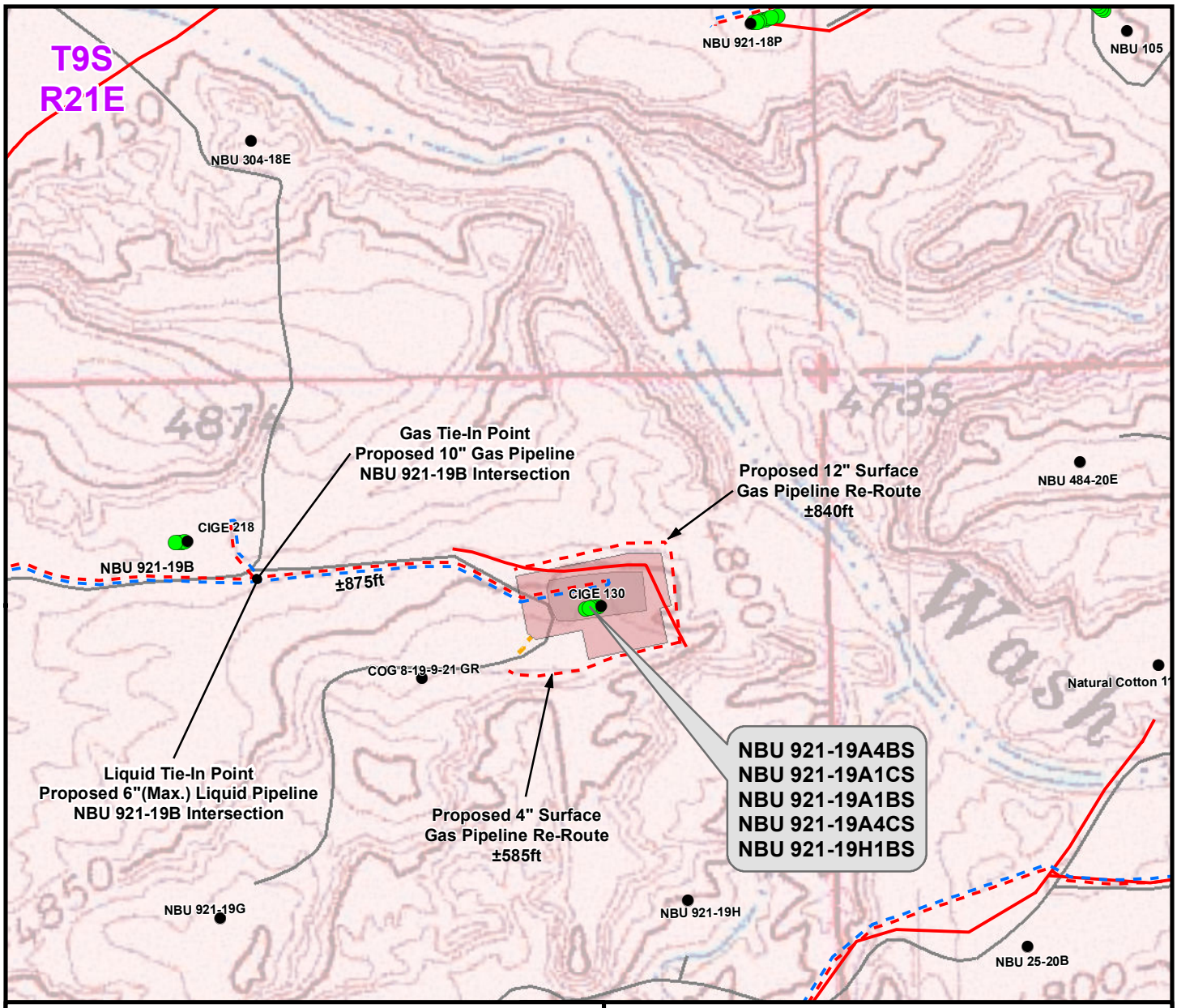
RECEIVED: July 07, 2014

API Well Number: 43047545860000



Proposed Liquid Pipeline	Length
Buried 6"(Max.) (Separator to Edge of Pad)	±295ft
Buried 6"(Max.) (Edge of Pad to 921-19B Intersection)	±875ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±1,170ft

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Buried 8" (Meter House to Edge of Pad)	±295ft
Buried 8" (Edge of Pad to 921-19B Intersection)	±875ft
Surface 12"(Pipeline Re-Route)	±840ft
Surface 4" (Pipeline Re-Route)	±585ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±1,170ft
TOTAL PROPOSED SURFACE GAS PIPELINE =	±1,425ft

Legend

Well - Proposed; Well - Existing; Well Pad - Proposed; Well Pad - Existing; Gas Pipeline - Proposed; Gas Pipeline - To Be Upgraded; Gas Pipeline - Existing; Liquid Pipeline - Proposed; Liquid Pipeline - Existing; Road - Proposed; Road - Existing; Bureau of Land Management; Indian Reservation; State; Private

WELL PAD - NBU 921-19A

TOPO D2 (PAD & PIPELINE DETAIL)
NBU 921-19A4BS,
NBU 921-19A1CS, NBU 921-19A1BS,
NBU 921-19A4CS & NBU 921-19H1BS
LOCATED IN SECTION 19, T9S, R21E
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 500ft	NAD83 USP Central	SHEET NO:	15
DRAWN: TL	DATE: 28 Sep 2012	15 OF 17	
REVISED: TL	DATE: 17 Dec 2013		

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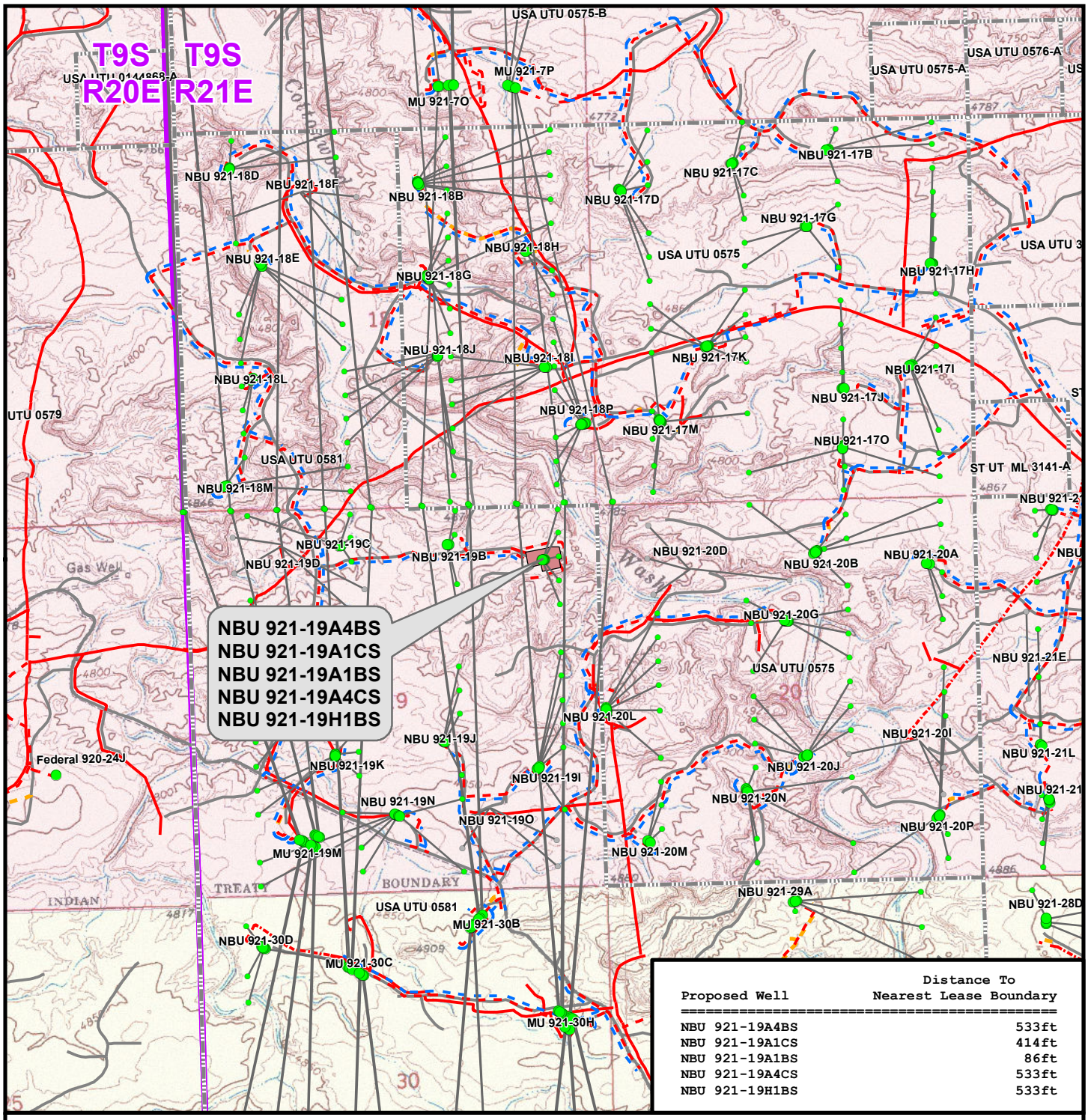
RECEIVED: July 07, 2014

API Well Number: 43047545860000



Proposed Well	Distance To Nearest Lease Boundary
NBU 921-19A4BS	533ft
NBU 921-19A1CS	414ft
NBU 921-19A1BS	86ft
NBU 921-19A4CS	533ft
NBU 921-19H1BS	533ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Lease Boundary
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

WELL PAD - NBU 921-19A

TOPO E
NBU 921-19A4BS,
NBU 921-19A1CS, NBU 921-19A1BS,
NBU 921-19A4CS & NBU 921-19H1BS
LOCATED IN SECTION 19, T9S, R21E
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 16	
DRAWN: TL	DATE: 28 Sep 2012	16 OF 17	
REVISED: TL	DATE: 17 Dec 2013		

File: K:\ANADARKO\2012\2012_76_NBU_921-19-30_FOCUS\GIS\Maps_ABCDE\NBU 921-19A\NBU 921-19A_E.mxd, 10/3/2012 11:58:26 AM

Kerr-McGee Oil & Gas Onshore, LP
WELL PAD - NBU 921-19A
WELLS –NBU 921-19A4BS,
NBU 921-19A1CS, NBU 921-19A1BS,
NBU 921-19A4CS & NBU 921-19H1BS
Section 19, T9S, R21E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 17.7 miles to a Class D County Road to the southwest. Exit right and proceed in a southwesterly direction along the Class D County Road approximately 3.9 miles to a second Class D County Road to the northwest. Exit right and proceed in a northwesterly direction along the second Class D County Road approximately 1.2 miles to the intersection of a Tribal Road. Exit left and proceed in a northwesterly direction along the Tribal Road approximately 0.7 miles to a second Tribal Road to the north. Exit right and proceed in a northerly direction along the second Tribal Road approximately 0.6 miles to a service road to the east. Exit right and proceed in an easterly direction along the service road approximately 0.5 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 48.1 miles in a southerly direction.

RECEIVED: July 07, 2014

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 921-19A Pad
Well: NBU 921-19H1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

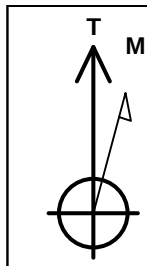
WELL DETAILS: NBU 921-19H1BS

G 4856 & KB 4 @ 4860.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14538906.15	2035966.98	40.0267064	-109.5870889

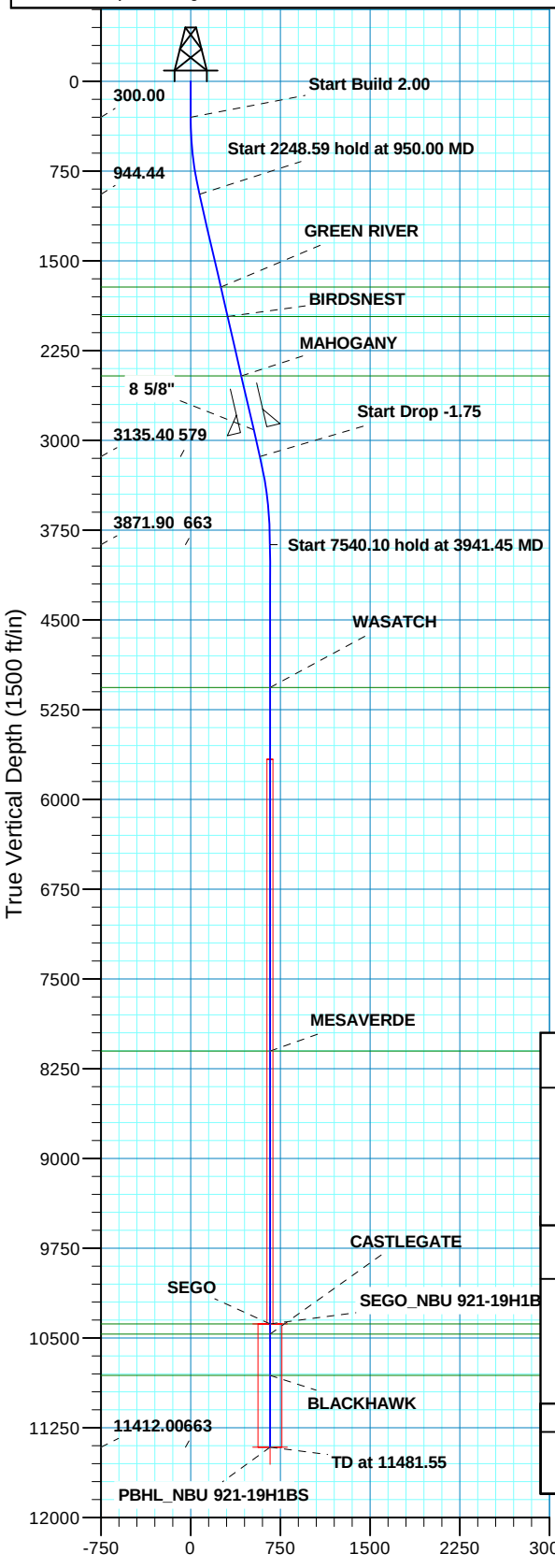
DESIGN TARGET DETAILS

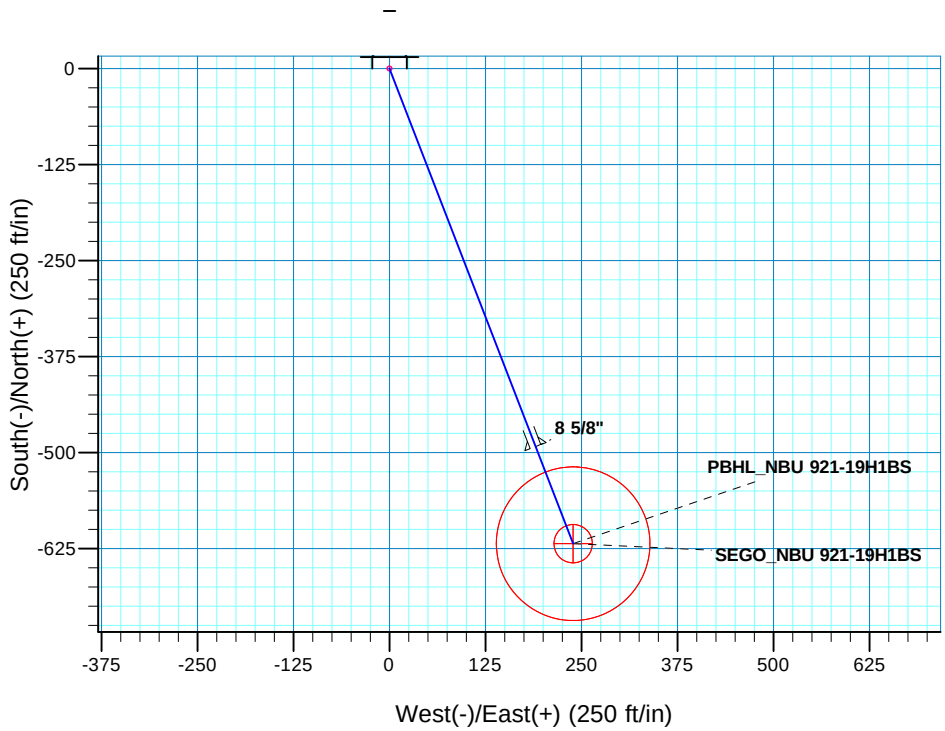
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	10383.00	-618.56	239.10	14538291.46	2036215.86	40.0250080	-109.5862350	Circle (Radius: 25.00)
	- plan hits target center							
PBH	11412.00	-618.56	239.10	14538291.46	2036215.86	40.0250080	-109.5862350	Circle (Radius: 100.00)
	- plan hits target center							



Azimuths to True North
Magnetic North: 10.89°

Magnetic Field
Strength: 52011.0snT
Dip Angle: 65.80°
Date: 2013/11/11
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
950.00	13.00	158.87	944.44	-68.49	26.47	2.00	158.87	73.42	
3198.59	13.00	158.87	3135.40	-540.29	208.84	0.00	0.00	579.25	
3941.45	0.00	0.00	3871.90	-618.56	239.10	1.75	180.00	663.16	
11481.55	0.00	0.00	11412.00	-618.56	239.10	0.00	0.00	663.16	PBHL_NBU 921-19H1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTON 19 T9S R21E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1719.00	1744.94	GREEN RIVER
1966.00	1998.43	BIRDSNEST
2462.00	2507.48	MAHOGANY
5066.00	5135.55	WASATCH
8104.00	8173.55	MESAVERDE
10383.00	10452.55	SEGO
10468.00	10537.55	CASTLEGATE
10812.00	10881.55	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2912.00	2969.32	8 5/8"	8.625

RECEIV

Plan: PLAN #1 PRELIMINARY (NBU 921-19H1BS/OH)

Created By: RobertScott Date: 9:26, November 12 2013

API Well Number: 43047545860000

Scientific Drilling

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N
NBU 921-19A Pad
NBU 921-19H1BS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

12 November, 2013

Anadarko Petroleum Corporation

RECEIVED: July 07, 2014

Scientific Drilling

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-19H1BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	G 4856 & KB 4 @ 4860.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	G 4856 & KB 4 @ 4860.00ft (ASSUMED)
Site:	NBU 921-19A Pad	**North Reference:**	True
Well:	NBU 921-19H1BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site NBU 921-19A Pad, SECTON 19 T9S R21E

Site Position:		**Northing:**	14,538,910.11 usft	**Latitude:**	40.0267164
From:	Lat/Long	**Easting:**	2,035,986.79 usft	**Longitude:**	-109.5870179
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.91 °

Well NBU 921-19H1BS, 789 FNL 771 FEL

Well Position	**+N/-S**	-3.64 ft	**Northing:**	14,538,906.15 usft	**Latitude:**	40.0267064
	+E/-W	-19.88 ft	**Easting:**	2,035,966.97 usft	**Longitude:**	-109.5870889
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	0.00 ft	**Ground Level:**	4,856.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	2013/11/11	10.89	65.80	52,011

Design PLAN #1 PRELIMINARY

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	158.87

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
950.00	13.00	158.87	944.44	-68.49	26.47	2.00	2.00	0.00	158.87	
3,198.59	13.00	158.87	3,135.40	-540.29	208.84	0.00	0.00	0.00	0.00	
3,941.45	0.00	0.00	3,871.90	-618.56	239.10	1.75	-1.75	0.00	180.00	
11,481.55	0.00	0.00	11,412.00	-618.56	239.10	0.00	0.00	0.00	0.00	PBHL_NBU 921-19H

Scientific Drilling

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-19H1BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	G 4856 & KB 4 @ 4860.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	G 4856 & KB 4 @ 4860.00ft (ASSUMED)
Site:	NBU 921-19A Pad	**North Reference:**	True
Well:	NBU 921-19H1BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
400.00	2.00	158.87	399.98	-1.63	0.63	1.75	2.00	2.00	0.00
500.00	4.00	158.87	499.84	-6.51	2.52	6.98	2.00	2.00	0.00
600.00	6.00	158.87	599.45	-14.64	5.66	15.69	2.00	2.00	0.00
700.00	8.00	158.87	698.70	-26.00	10.05	27.88	2.00	2.00	0.00
800.00	10.00	158.87	797.47	-40.60	15.69	43.52	2.00	2.00	0.00
900.00	12.00	158.87	895.62	-58.39	22.57	62.60	2.00	2.00	0.00
950.00	13.00	158.87	944.44	-68.49	26.47	73.42	2.00	2.00	0.00
Start 2248.59 hold at 950.00 MD									
1,000.00	13.00	158.87	993.16	-78.98	30.53	84.67	0.00	0.00	0.00
1,100.00	13.00	158.87	1,090.59	-99.96	38.64	107.17	0.00	0.00	0.00
1,200.00	13.00	158.87	1,188.03	-120.94	46.75	129.66	0.00	0.00	0.00
1,300.00	13.00	158.87	1,285.47	-141.92	54.86	152.16	0.00	0.00	0.00
1,400.00	13.00	158.87	1,382.90	-162.91	62.97	174.65	0.00	0.00	0.00
1,500.00	13.00	158.87	1,480.34	-183.89	71.08	197.15	0.00	0.00	0.00
1,600.00	13.00	158.87	1,577.78	-204.87	79.19	219.64	0.00	0.00	0.00
1,700.00	13.00	158.87	1,675.21	-225.85	87.30	242.14	0.00	0.00	0.00
1,744.94	13.00	158.87	1,719.00	-235.28	90.95	252.25	0.00	0.00	0.00
GREEN RIVER									
1,800.00	13.00	158.87	1,772.65	-246.83	95.41	264.63	0.00	0.00	0.00
1,900.00	13.00	158.87	1,870.09	-267.82	103.52	287.13	0.00	0.00	0.00
1,998.43	13.00	158.87	1,966.00	-288.47	111.50	309.27	0.00	0.00	0.00
BIRDSNEST									
2,000.00	13.00	158.87	1,967.53	-288.80	111.63	309.62	0.00	0.00	0.00
2,100.00	13.00	158.87	2,064.96	-309.78	119.74	332.12	0.00	0.00	0.00
2,200.00	13.00	158.87	2,162.40	-330.76	127.85	354.61	0.00	0.00	0.00
2,300.00	13.00	158.87	2,259.84	-351.75	135.96	377.11	0.00	0.00	0.00
2,400.00	13.00	158.87	2,357.27	-372.73	144.07	399.60	0.00	0.00	0.00
2,500.00	13.00	158.87	2,454.71	-393.71	152.18	422.10	0.00	0.00	0.00
2,507.48	13.00	158.87	2,462.00	-395.28	152.79	423.78	0.00	0.00	0.00
MAHOGANY									
2,600.00	13.00	158.87	2,552.15	-414.69	160.29	444.59	0.00	0.00	0.00
2,700.00	13.00	158.87	2,649.58	-435.67	168.40	467.09	0.00	0.00	0.00
2,800.00	13.00	158.87	2,747.02	-456.66	176.52	489.58	0.00	0.00	0.00
2,900.00	13.00	158.87	2,844.46	-477.64	184.63	512.08	0.00	0.00	0.00
2,969.32	13.00	158.87	2,912.00	-492.18	190.25	527.67	0.00	0.00	0.00
8 5/8"									
3,000.00	13.00	158.87	2,941.90	-498.62	192.74	534.57	0.00	0.00	0.00
3,100.00	13.00	158.87	3,039.33	-519.60	200.85	557.07	0.00	0.00	0.00
3,198.59	13.00	158.87	3,135.40	-540.29	208.84	579.25	0.00	0.00	0.00
Start Drop -1.75									
3,200.00	12.98	158.87	3,136.77	-540.58	208.96	579.56	1.75	-1.75	0.00
3,300.00	11.23	158.87	3,234.54	-560.14	216.51	600.53	1.75	-1.75	0.00
3,400.00	9.48	158.87	3,332.91	-576.89	222.99	618.49	1.75	-1.75	0.00
3,500.00	7.73	158.87	3,431.79	-590.84	228.38	633.45	1.75	-1.75	0.00
3,600.00	5.98	158.87	3,531.07	-601.97	232.68	645.37	1.75	-1.75	0.00
3,700.00	4.23	158.87	3,630.67	-610.26	235.89	654.26	1.75	-1.75	0.00
3,800.00	2.48	158.87	3,730.49	-615.71	238.00	660.11	1.75	-1.75	0.00
3,900.00	0.73	158.87	3,830.45	-618.31	239.00	662.90	1.75	-1.75	0.00

Scientific Drilling

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-19H1BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	G 4856 & KB 4 @ 4860.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	G 4856 & KB 4 @ 4860.00ft (ASSUMED)
Site:	NBU 921-19A Pad	**North Reference:**	True
Well:	NBU 921-19H1BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,941.45	0.00	0.00	3,871.90	-618.56	239.10	663.16	1.75	-1.75	0.00
Start 7540.10 hold at 3941.45 MD									
4,000.00	0.00	0.00	3,930.45	-618.56	239.10	663.16	0.00	0.00	0.00
4,100.00	0.00	0.00	4,030.45	-618.56	239.10	663.16	0.00	0.00	0.00
4,200.00	0.00	0.00	4,130.45	-618.56	239.10	663.16	0.00	0.00	0.00
4,300.00	0.00	0.00	4,230.45	-618.56	239.10	663.16	0.00	0.00	0.00
4,400.00	0.00	0.00	4,330.45	-618.56	239.10	663.16	0.00	0.00	0.00
4,500.00	0.00	0.00	4,430.45	-618.56	239.10	663.16	0.00	0.00	0.00
4,600.00	0.00	0.00	4,530.45	-618.56	239.10	663.16	0.00	0.00	0.00
4,700.00	0.00	0.00	4,630.45	-618.56	239.10	663.16	0.00	0.00	0.00
4,800.00	0.00	0.00	4,730.45	-618.56	239.10	663.16	0.00	0.00	0.00
4,900.00	0.00	0.00	4,830.45	-618.56	239.10	663.16	0.00	0.00	0.00
5,000.00	0.00	0.00	4,930.45	-618.56	239.10	663.16	0.00	0.00	0.00
5,100.00	0.00	0.00	5,030.45	-618.56	239.10	663.16	0.00	0.00	0.00
5,135.55	0.00	0.00	5,066.00	-618.56	239.10	663.16	0.00	0.00	0.00
WASATCH									
5,200.00	0.00	0.00	5,130.45	-618.56	239.10	663.16	0.00	0.00	0.00
5,300.00	0.00	0.00	5,230.45	-618.56	239.10	663.16	0.00	0.00	0.00
5,400.00	0.00	0.00	5,330.45	-618.56	239.10	663.16	0.00	0.00	0.00
5,500.00	0.00	0.00	5,430.45	-618.56	239.10	663.16	0.00	0.00	0.00
5,600.00	0.00	0.00	5,530.45	-618.56	239.10	663.16	0.00	0.00	0.00
5,700.00	0.00	0.00	5,630.45	-618.56	239.10	663.16	0.00	0.00	0.00
5,800.00	0.00	0.00	5,730.45	-618.56	239.10	663.16	0.00	0.00	0.00
5,900.00	0.00	0.00	5,830.45	-618.56	239.10	663.16	0.00	0.00	0.00
6,000.00	0.00	0.00	5,930.45	-618.56	239.10	663.16	0.00	0.00	0.00
6,100.00	0.00	0.00	6,030.45	-618.56	239.10	663.16	0.00	0.00	0.00
6,200.00	0.00	0.00	6,130.45	-618.56	239.10	663.16	0.00	0.00	0.00
6,300.00	0.00	0.00	6,230.45	-618.56	239.10	663.16	0.00	0.00	0.00
6,400.00	0.00	0.00	6,330.45	-618.56	239.10	663.16	0.00	0.00	0.00
6,500.00	0.00	0.00	6,430.45	-618.56	239.10	663.16	0.00	0.00	0.00
6,600.00	0.00	0.00	6,530.45	-618.56	239.10	663.16	0.00	0.00	0.00
6,700.00	0.00	0.00	6,630.45	-618.56	239.10	663.16	0.00	0.00	0.00
6,800.00	0.00	0.00	6,730.45	-618.56	239.10	663.16	0.00	0.00	0.00
6,900.00	0.00	0.00	6,830.45	-618.56	239.10	663.16	0.00	0.00	0.00
7,000.00	0.00	0.00	6,930.45	-618.56	239.10	663.16	0.00	0.00	0.00
7,100.00	0.00	0.00	7,030.45	-618.56	239.10	663.16	0.00	0.00	0.00
7,200.00	0.00	0.00	7,130.45	-618.56	239.10	663.16	0.00	0.00	0.00
7,300.00	0.00	0.00	7,230.45	-618.56	239.10	663.16	0.00	0.00	0.00
7,400.00	0.00	0.00	7,330.45	-618.56	239.10	663.16	0.00	0.00	0.00
7,500.00	0.00	0.00	7,430.45	-618.56	239.10	663.16	0.00	0.00	0.00
7,600.00	0.00	0.00	7,530.45	-618.56	239.10	663.16	0.00	0.00	0.00
7,700.00	0.00	0.00	7,630.45	-618.56	239.10	663.16	0.00	0.00	0.00
7,800.00	0.00	0.00	7,730.45	-618.56	239.10	663.16	0.00	0.00	0.00
7,900.00	0.00	0.00	7,830.45	-618.56	239.10	663.16	0.00	0.00	0.00
8,000.00	0.00	0.00	7,930.45	-618.56	239.10	663.16	0.00	0.00	0.00
8,100.00	0.00	0.00	8,030.45	-618.56	239.10	663.16	0.00	0.00	0.00
8,173.55	0.00	0.00	8,104.00	-618.56	239.10	663.16	0.00	0.00	0.00
MESAVERDE									
8,200.00	0.00	0.00	8,130.45	-618.56	239.10	663.16	0.00	0.00	0.00
8,300.00	0.00	0.00	8,230.45	-618.56	239.10	663.16	0.00	0.00	0.00
8,400.00	0.00	0.00	8,330.45	-618.56	239.10	663.16	0.00	0.00	0.00
8,500.00	0.00	0.00	8,430.45	-618.56	239.10	663.16	0.00	0.00	0.00
8,600.00	0.00	0.00	8,530.45	-618.56	239.10	663.16	0.00	0.00	0.00

Scientific Drilling

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-19H1BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	G 4856 & KB 4 @ 4860.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	G 4856 & KB 4 @ 4860.00ft (ASSUMED)
Site:	NBU 921-19A Pad	**North Reference:**	True
Well:	NBU 921-19H1BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,700.00	0.00	0.00	8,630.45	-618.56	239.10	663.16	0.00	0.00	0.00
8,800.00	0.00	0.00	8,730.45	-618.56	239.10	663.16	0.00	0.00	0.00
8,900.00	0.00	0.00	8,830.45	-618.56	239.10	663.16	0.00	0.00	0.00
9,000.00	0.00	0.00	8,930.45	-618.56	239.10	663.16	0.00	0.00	0.00
9,100.00	0.00	0.00	9,030.45	-618.56	239.10	663.16	0.00	0.00	0.00
9,200.00	0.00	0.00	9,130.45	-618.56	239.10	663.16	0.00	0.00	0.00
9,300.00	0.00	0.00	9,230.45	-618.56	239.10	663.16	0.00	0.00	0.00
9,400.00	0.00	0.00	9,330.45	-618.56	239.10	663.16	0.00	0.00	0.00
9,500.00	0.00	0.00	9,430.45	-618.56	239.10	663.16	0.00	0.00	0.00
9,600.00	0.00	0.00	9,530.45	-618.56	239.10	663.16	0.00	0.00	0.00
9,700.00	0.00	0.00	9,630.45	-618.56	239.10	663.16	0.00	0.00	0.00
9,800.00	0.00	0.00	9,730.45	-618.56	239.10	663.16	0.00	0.00	0.00
9,900.00	0.00	0.00	9,830.45	-618.56	239.10	663.16	0.00	0.00	0.00
10,000.00	0.00	0.00	9,930.45	-618.56	239.10	663.16	0.00	0.00	0.00
10,100.00	0.00	0.00	10,030.45	-618.56	239.10	663.16	0.00	0.00	0.00
10,200.00	0.00	0.00	10,130.45	-618.56	239.10	663.16	0.00	0.00	0.00
10,300.00	0.00	0.00	10,230.45	-618.56	239.10	663.16	0.00	0.00	0.00
10,400.00	0.00	0.00	10,330.45	-618.56	239.10	663.16	0.00	0.00	0.00
10,452.55	0.00	0.00	10,383.00	-618.56	239.10	663.16	0.00	0.00	0.00
SEGO - SEGO_NBU 921-19H1BS									
10,500.00	0.00	0.00	10,430.45	-618.56	239.10	663.16	0.00	0.00	0.00
10,537.55	0.00	0.00	10,468.00	-618.56	239.10	663.16	0.00	0.00	0.00
CASTLEGATE									
10,600.00	0.00	0.00	10,530.45	-618.56	239.10	663.16	0.00	0.00	0.00
10,700.00	0.00	0.00	10,630.45	-618.56	239.10	663.16	0.00	0.00	0.00
10,800.00	0.00	0.00	10,730.45	-618.56	239.10	663.16	0.00	0.00	0.00
10,881.55	0.00	0.00	10,812.00	-618.56	239.10	663.16	0.00	0.00	0.00
BLACKHAWK									
10,900.00	0.00	0.00	10,830.45	-618.56	239.10	663.16	0.00	0.00	0.00
11,000.00	0.00	0.00	10,930.45	-618.56	239.10	663.16	0.00	0.00	0.00
11,100.00	0.00	0.00	11,030.45	-618.56	239.10	663.16	0.00	0.00	0.00
11,200.00	0.00	0.00	11,130.45	-618.56	239.10	663.16	0.00	0.00	0.00
11,300.00	0.00	0.00	11,230.45	-618.56	239.10	663.16	0.00	0.00	0.00
11,400.00	0.00	0.00	11,330.45	-618.56	239.10	663.16	0.00	0.00	0.00
11,481.55	0.00	0.00	11,412.00	-618.56	239.10	663.16	0.00	0.00	0.00
TD at 11481.55 - PBHL_NBU 921-19H1BS									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SEGO_NBU 921-19H1B - plan hits target center - Circle (radius 25.00)	0.00	0.00	10,383.00	-618.56	239.10	14,538,291.47	2,036,215.85	40.0250080	-109.5862350
PBHL_NBU 921-19H1B - plan hits target center - Circle (radius 100.00)	0.00	0.00	11,412.00	-618.56	239.10	14,538,291.47	2,036,215.85	40.0250080	-109.5862350

Scientific Drilling

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 921-19H1BS
Company:	US ROCKIES REGION PLANNING	**TVD Reference:**	G 4856 & KB 4 @ 4860.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**MD Reference:**	G 4856 & KB 4 @ 4860.00ft (ASSUMED)
Site:	NBU 921-19A Pad	**North Reference:**	True
Well:	NBU 921-19H1BS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,969.32	2,912.00	8 5/8"	8.625	11.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,744.94	1,719.00	GREEN RIVER			
1,998.43	1,966.00	BIRDSNEST			
2,507.48	2,462.00	MAHOGANY			
5,135.55	5,066.00	WASATCH			
8,173.55	8,104.00	MESAVERDE			
10,452.55	10,383.00	SEGO			
10,537.55	10,468.00	CASTLEGATE			
10,881.55	10,812.00	BLACKHAWK			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
950.00	944.44	-68.49	26.47	Start 2248.59 hold at 950.00 MD
3,198.59	3,135.40	-540.29	208.84	Start Drop -1.75
3,941.45	3,871.90	-618.56	239.10	Start 7540.10 hold at 3941.45 MD
11,481.55	11,412.00	-618.56	239.10	TD at 11481.55

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Kerr-McGee Oil & Gas Onshore. L.P.

NBU 921-19A Pad

API #		**NBU 921-19A1BS**		
	Surface:	785 FNL / 751 FEL	NENE	Lot
	BHL:	86 FNL / 532 FEL	NENE	Lot
API #		**NBU 921-19A1CS**		
	Surface:	784 FNL / 741 FEL	NENE	Lot
	BHL:	414 FNL / 534 FEL	NENE	Lot
API #		**NBU 921-19A4BS**		
	Surface:	782 FNL / 731 FEL	NENE	Lot
	BHL:	746 FNL / 533 FEL	NENE	Lot
API #		**NBU 921-19A4CS**		
	Surface:	787 FNL / 761 FEL	NENE	Lot
	BHL:	1077 FNL / 533 FEL	NENE	Lot
API #		**NBU 921-19H1BS**		
	Surface:	789 FNL / 771 FEL	NENE	Lot
	BHL:	1408 FNL / 533 FEL	SENE	Lot

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

An on-site meeting was held on October 24, 2012. Present were:

- Tyler Cox - BLM;
- Antonio Pingree - BIA;
- Brad Pinecoose - Ute Indian Tribe;
- Amy Ackman - Montgomery Archeological Consultants Inc.;
- Scott Carson - Smiling Lake Consulting;
- Mitch Batty - Timberline Engineering & Land Surveying, Inc.;
- Danielle Piernot, Raleen White, Cara Mahler, Justin Brady, Doyle Holmes, Rod Anderson, Charles Chase - Kerr-McGee
- Nick Hall Grasslands Consulting, Inc.
- Justin Strauss - SWCA Environmental Consultants

A. Existing Roads:

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with Onshore Order #1, Kerr-McGee will, in accordance with BMPs, improve or maintain existing roads in a condition

that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing will be performed where excessive rutting or erosion may occur. Dust control will be performed as necessary to ensure safe operating conditions.

Roads, gathering lines and electrical distribution lines will occupy common disturbance corridors where possible. Where available, roadways will be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor will overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

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Please refer to Topo B, for existing roads.

B. New or Reconstructed Access Roads:

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BIA.

Each new well pad or pad expansion may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, as per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

Where safety objectives can be met. Kerr-McGee may use unimproved and/or two-track roads for lease operations, to lessen total disturbance.

Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities maybe constructed to divert surface water runoff. Drainage features, including culverts, may constructed or installed prior to commencing other operations, including drilling or facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s), as necessary.

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activity will not be conducted using frozen or saturated materials or during periods when significant watershed damage

(e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement, construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

The following segments will require a ROW to be submitted under a different cover to the Ute Indian Tribe.

±65’ (0.01 miles) – Section 19 (NE/4) T9S R21E – On lease UTU0581 Ute Indian Tribe surface, proposed road from the edge of the pad to the existing road to the South. Please refer to Topo B.

C. Location of Existing Wells:

A) Refer to Topo C.

D. Location of Existing and/or Proposed Facilities:

This pad will expand the existing pad for the CIGE 130, which is a Producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on November 18, 2013. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad. A berm will be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will generally be constructed of to hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat,non-reflective, earth-tone color chosen at the onsite (typically Shadow Gray). A production facility layout is provided as part of a project-specific APD, ROW or NOS submission.

GAS GATHERING

Please refer to Topo D2- Pad and Pipeline Detail.

The gas gathering pipeline material: Steel line pipe. Surface = Bare pipe. Buried = Coated with fusion bonded epoxy coating (or equivalent). The total gas gathering pipeline distance from the meter to the tie in point is ±1155' and the individual segments are broken up as follows:

The following segments will require a ROW to be submitted under a different cover to the Ute Indian Tribe.

±1155' (.21) – Section 19 T9S R21E– On-lease UTU 0581, Ute Indian Tribe Surface, New 8" buried gas gathering pipeline from the meter to the proposed 10" gas gathering pipeline tie-in point at the NBU 921-19B intersection. Please refer to the Topo D2- Pad and Pipeline detail.

±1425' (.27) – Section 19 T9S R21E– On-lease UTU 0581, Ute Indian Tribe Surface, Total proposed Surface Gas Pipeline Re-route. Please refer to Topo D2- Pad and Pipeline detail.

LIQUID GATHERING

Please refer to Topo D2- Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is ±1155' and the individual segments are broken up as follows:

The following segments will require a ROW to be submitted under a different cover to the Ute Indian Tribe.

±1155' (.21) – Section 19 T9S R21E– On-lease UTU 0581, Ute Indian Tribe Surface, New 6" buried liquid gathering pipeline from the meter to the proposed 6" liquid gathering pipeline tie-in point at the NBU 921-19B Intersection. Please refer to Topo D2- Pad and Pipeline detail.

Pipeline Gathering Construction

RECEIVED: July 07, 2014

Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee. Gas gathering pipeline(s,) gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. The area of disturbance during construction from the edge of road or well pad will typically be 30' in width. Where pipelines run cross country, the width of disturbance will typically be 45 ft for buried lines and 30 ft for surface lines. In addition, Kerr-McGee requests for a permanent 30' disturbance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent disturbance width is for maintenance and repairs. Cross country permanent disturbance width also are required to be 30ft.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. In some surface pipeline installation instances pipe cannot be constructed where it will lay. In these cases where an above-ground pipeline is constructed parallel and adjacent to a road, it will be welded/fused on the road and then lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment.

Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2 inches (typically fuel gas lines) to 24 inches (typically transportation lines) in diameter, but 6 to 16 inches is typical for a buried gas line. The diameter of liquids pipelines may vary from 2 inches to 12 inches, but 6 inches is the typical diameter. Gas lift lines may vary from 2 to 12 inches in diameter, but 6-inch diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

When installing a buried pipeline, typically topsoil will be removed, windrowed and placed on the non-working side of the route later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6 feet, but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18-48 inches.

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route’s intersection with an access road.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, Kerr-McGee will apply all applicable Army Corps mandates as well as the BLM’s Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.

RECEIVED: July 07, 2014

Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation. When no longer deemed necessary by the operator, Kerr-McGee or it's successor will consult with the Vernal BIA Office before terminating of the use of the pipeline(s).

The Anadarko Completions Transportation System (ACTS) information:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one storage area to be constructed on the drilling pad or a traditional drilling operation with one pit. The storage area will be used to contain only the de-watered drill cuttings and will be lined and reclaimed according to traditional pit closure standards. The pit will be constructed to

allow for completion operations. The completion operations pit is lined and will be used for the wells drilled on the pad or used as part of our Anadarko Completions Transportation (ACTS) system which is discussed in more detail below. Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completion pit.

If Kerr-McGee does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit will be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system.

Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of frac fluids by utilizing existing reserve pits and temporary, surface-laid aluminum liquids transfer lines between frac locations. The pit will be refurbished as follows when a traditional drill pit is used: mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. A refurbished or newly constructed pit wi or smaller as specified in the originally approved ROW/APD. The pit refurb will be done in a normal procedure and there will be no modification to the pit.

All four sides of the completions pit will be fenced in according to standard pit fencing procedures. Netting will be installed over all pits.

Any hydrocarbons collected will be treated and sold at approved sales facilities. A loading/ unloading rack with will also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit .

ACTS will require temporarily laying multiple 6” aluminum water transfer lines on the surface between either existing or refurbished reserve pits. The temporary aluminum transfer lines will be utilized to transport frac fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon completion of the frac operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The temporary ACTS lines will be permitted under a separate cover to the Ute Indian Tribe.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. Kerr-McGee requests to keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other frac jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. Kerr-McGee understands that due to the temporary nature of this system, BIA considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BIA.

E. Location and Types of Water Supply:

Water for drilling and completion operations will be obtained from the following sources:

JD Field Services:
Green River: 1087' FSL & 1020' FEL, Sec. 15 – T2N – R22E

RN Industries:
High Pressure: 705' FNL & 675' FWL, Sec. 1 – T6S – R22E
1057' FNL & 390' FWL, Sec. 1 – T6S – R22E
1239' FNL & 52' FEL, Sec. 6 – T6S – R23E

White River: 501' FNL & 1676' FEL, Sec. 9 – T8S – R20E
471' FNL & 1676' FEL, Sec. 9 – T8S – R20E
900' FNL & 550' FEL, Sec. 35 – T9S – R22E
200' FNL & 950' FEL, Sec. 2 – T10S – R22E
275' FSL & 2275' FEL, Sec. 2 – T10S – R22E
122' FSL & 1350' FEL, Sec. 11 – T10S – R22E
1670' FSL & 500' FEL, Sec. 12 – T10S – R22E
959' FNL & 705' FEL, Sec. 13 – T10S – R22E
600' FSL & 900' FEL, Sec. 13 – T10S – R22E
Water Plant: 481' FNL & 2176' FEL, Sec. 9 – T8S – R20E
471' FNL & 2176' FEL, Sec. 9 – T8S – R20E

Frog Pond: 4820' FNL & 1200' FWL, Sec. 33 – T8S – R20E
4850' FNL & 700' FWL, Sec. 33 – T8S – R20E

Blue Tanks: 200' FNL & 405' FEL, Sec. 32 – T4S – R3E

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

F. Construction Materials:

Construction operations will typically be completed with native materials found on location. Construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source (described in site-specific documents). No construction materials will be removed from Tribal lands without prior approval from the BIA. A source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BIA.

G. Methods for Handling Waste:

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. Kerr-McGee also maintains a Spill Control and Countermeasure Plan, which includes notification requirements, including the BIA, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of CERCLA, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, Kerr-McGee will comply with the notification requirements of NTL-3A. Drill cuttings and/or drilling fluids will be contained in the reserve/frac pit whether a closed loop system is used or not. Cuttings will be buried in pit(s) upon closure. Unless specifically approved by the BIA, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

RECEIVED: July 07, 2014

Pits will be constructed to minimize the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc.). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/ sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by the BIA. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with an impermeable liner. The liner will be a synthetic material 30 mil or thicker. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions (freeboard, etc.) allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per OSO 7.
Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Otherwise, fluids disposal locations and associated haul routes, for ROW consideration, are typically depicted on Topo A of individual projects. Revisions to the water source or method of transportation will be subject to written approval from the BIA.

Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after one year from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse (trash and other solid waste including cans, paper, cable, etc.) generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced to prevent wildlife or livestock entry.

Maximum distance between any 2 fence posts shall be no greater than 16 feet. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Materials Management

RECEIVED: July 07, 2014

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. Kerr-McGee maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time. Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities (crude oil/condensate, produced water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Any produced water separated from recoverable condensate from the proposed well will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E
NBU #159 in Sec. 35 T9S R21E
Ace Oilfield in Sec. 2 T6S R20E
MC&MC in Sec. 12 T6S R19E
Pipeline Facility in Sec. 36 T9S R20E
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E
Bonanza Evaporation Pond in Sec. 2 T10S R23E

Or to one of the following Kerr-McGee active Salt Water Disposal (SWD) wells:

NBU 159 SWD in Sec. 35 T9S R21E
CIGE 112D SWD in Sec. 19 T9S R21E
CIGE 114 SWD in Sec. 34 T9S R21E
NBU 921-34K SWD in Sec. 34 T9S R21E
NBU 921-33F SWD in Sec. 34 T9S R21E

H. Ancillary Facilities:

No additional ancillary facilities are planned for this location.

I. Well Site Layout:

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of disturbance will not exceed the maximum disturbance outlined in the attached exhibits.

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production/ Produced Liquid tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BIA.

J. Plans for Surface Reclamation:

The surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. Interim reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility

RECEIVED: July 07, 2014

abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils material, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation

Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BIA for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left “rough” after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit. Disposal of pit fluids and linings is discussed in Section G.

Final Reclamation

Final reclamation will be performed for unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by Kerr-McGee. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BIA will be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site to the approximate contour that existed prior to pad construction, final grading will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers, where practical. The surface soil material will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep, where practical. The entire area will be uniformly covered with the depressions constructed perpendicular to the natural flow of water.

Reclamation of roads will be performed at the discretion of the BIA/Tribe. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications as proposed below in "Measures Common to Interim and Final Reclamation".

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to the BIA/Tribe.

Measures Common to Interim and Final Reclamation

Soil preparation will be conducted using a disk for areas in need of more soil preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur year-round as conditions allow and will typically be accomplished through the use of a no-till rangeland style seed drill with a “picker box” in order to seed “fluffy” seed. Where drill seeding is not the preferred method, seed will be broadcast and then raked into the ground at double the rate of drill seeding. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for

re-vegetation. The seed mixes will be selected from a list provided by or approved by the BIA/Tribe or a specific seed mix will be proposed by Kerr-McGee to the BIA/Tribe and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain “cheat grass free seed”.

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

Natural Buttes Area Mix Option 1:	**Pure Live Seed lbs/acre**
Indian Ricegrass	3
Thick Spike	2
Sandberg	0.5
Bottlebrush	1
Crested	1
Winterfat	0.25
Shadscale	1.5
Four-wing	0.75
Forage Kochia	0.25
Total	10.25

Natural Buttes Area Mix Option 2:	**Pure Live Seed lbs/acre**
Great Basin Wildrye	2.50
Indian Ricegrass (Nezpar)	0.50
Crested Wheatgrass	2.00
Siberian Wheatgrass	2.00
Bottlebrush Squirreltail	1.00
Munro Globemallow	0.50
Palmer Penstemon	0.10
Rocky Mtn beeplant	0.50
Western yarrow	0.10
Shadscale	0.50
Forage Kochia	0.50
Total	10.20

Natural Buttes Area Mix Option 3:	**Pure Live Seed lbs/acre**
Galleta Grass	2.00
Sandberg bluegrass	0.50
Shadscale	0.50
Bluebunch (secar)	2.00
Indian Ricegrass (Nezpar)	2.00
Western Wheatgrass (Arriba)	2.00
Palmer penstemon	0.25
Munro Globemallow	0.15
Black Sage	0.25
Winterfat	0.25
Forage Kochia	0.25
Total	10.15

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machi
and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Weed Control

Noxious weeds will be controlled in akk orihect areas un accordance with all applicable rules and regulations.

K. Surface/Mineral Ownership:

Ute Indian Tribe
P.O. Box 70
988 South 7500 East Annex Building
Fort Duschesne, UT 84026
(435) 722-4307

United States of America
Bureau of Land Management
170 South 500 East
Vernal, UT 84078
(435)781-4400

L. Other Information:

Onsite Specifics:

Cultural and Paleontological Resources

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and Kerr-McGee will provide immediate notification to the BIA.

Resource Reports:

A Class I literature survey was completed on November 7, 2012 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 12-283.

A paleontological reconnaissance survey was completed on January 1, 2013 by SWCA Environmental Consultants. For additional details please refer to report UT13-14314-185

Biological field survey was completed on September 26, 2012 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-856.

Proposed Action Annual Emissions Tables:

Table 1: Proposed Action Annual Emissions (tons/year)[1]

Pollutant	Development	Production	Total
NOx	3.8	0.12	3.92
CO	2.2	0.11	2.31
VOC	0.1	4.9	5
SO_2	0.005	0.0043	0.0093
PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.025	0.425
Benzene	2.2E-03	0.044	0.046
Toluene	1.6E-03	0.103	0.105
Ethylbenzene	3.4E-04	0.005	0.005
Xylene	1.1E-03	0.076	0.077
n-Hexane	1.7E-04	0.145	0.145
Formaldehyde	1.3E-02	8.64E-05	1.31E-02

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	19.6	16,547	0.12%
VOC	25	127,495	0.02%

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

M. Lessee's or Operators' Representative & Certification:

Cara Mahler
Regulatory Analyst I
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6156

Tommy Thompson
General Manager, Drilling
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Cara Mahler

December 12, 2013
Date

Kerr-McGee Oil & Gas Onshore L.P., wholly owned subsidiary of Anadarko Petroleum Corporation, Standard Operating Practice Agreement for the Greater Natural Buttes Field

Drilling Program

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations, Onshore Oil and Gas Orders, and the approved plan of operation. As Operator, KMG is fully responsible for actions of subcontractors. A copy of these Standard Operating Practices will be furnished to the field representatives to insure compliance.

Bureau of Land Management Notification Requirements:

Location Constructions: At least 48 hours prior to construction of location and access roads including notification, if applicable, to other surface management agencies, such as Ute Tribe Energy and Mineral Department, State of Utah, or private surface owner(s).

Location Completion: Prior to moving on the drilling rig

Spud Notice: At least 24 hours prior to spudding the well.

Casing String and Cementing: At least 24 hours prior to running casing and cementing all casing.

Blow Out Preventer & Related Equipment Tests: At least 24 hours prior to initiating pressure tests.

First Production Notice: Within 5 days after a new well begins production; or, within 5 days of when production resumes after a well has been off production for more than 90 days.

Details of the on-site inspection, including date, time, weather conditions, and individuals present, will be submitted with the site-specific Application for Permit to Drill (APD).

1. Estimated Tops of Important Geologic Markers:

Formation and depths will be submitted with site-specific APDs.

2. Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Formation and depths will be submitted with site-specific APDs.

3. Pressure Control Equipment:

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Pressure Control Equipment Schematic is attached as appendix F. Any variance will be included in the site-specific APDs.

4. Proposed Casing & Cementing Program:

Proposed casing and cementing will be submitted with site-specific APDs.

5. Drilling Fluids Program:

Proposed drilling fluids will be submitted with site-specific APDs.

6. Evaluation Program:

Evaluation program will be submitted with site-specific APDs.

7. Abnormal Conditions:

Any abnormal condition will be submitted with site specific APDs.

8. Anticipated Starting Dates:

Drilling is planned to commence within the administrative period of an approved application.

9. Variances:

KMG respectfully requests a variance to several requirements associated with air drilling outlined in OSO 2:

Variance for air drilling

Air rig is only used by KMG to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig and is used to drill and construct the majority of the wellbore.

KMG typically utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 3,200 MD. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig

RECEIVED: July 07, 2014

also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill an 11inch hole to just above the Bird's Nest Interval. with an air hammer. The hammer is then tripped and replaced with an 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

OSO 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump, which is located near the reserve pit, will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement)

OSO 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and

RECEIVED: July 07, 2014

boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, OSO 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements

KMG also respectfully requests a variance to OSO 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). These wells are not exploratory wells and are being drilled in an area where the formation integrity is well known.

10. Other Information:

Drilling Program will be submitted with site-specific APDs.

SURFACE USE PROGRAM

A. Existing Roads:

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with OSO 1, KMG will improve or maintain existing roads in a condition that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing may be performed where excessive rutting or erosion may occur. Dust control may be performed as necessary to ensure safe operating conditions.

Roads, gathering lines and electrical distribution lines may occupy common disturbance corridors where possible. Where available, roadways may be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor may overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

Within individual APDs, please refer to Topo B, for existing roads.

B. New or Reconstructed Access Roads:

RECEIVED: July 07, 2014

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007). The BLM Manual Section 9113 (1985) will be considered in consultation with the BLM in the design, construction, improvement and maintenance of all new or reconstructed roads. If a new road would cross a water of the United States, KMG will adhere to all applicable US Army Corps of Engineers requirements in cooperation with the Utah Division of Water Rights.

New well pads or pad expansions may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

Where safety objectives can be met KMG may use unimproved and/or two-track roads for lease operations and to lessen total disturbance. Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities may be constructed to divert surface water runoff. Drainage features, including culverts, may be constructed or installed prior to commencing other operations, including drilling for facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s). Drainage features will meet the standards of the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007).

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activities will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement and construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

RECEIVED: July 07, 2014

Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

For individual APDs, refer to Topo B.

C. Location of Existing Wells:

For individual APDs, refer to Topo C

D. Location of Existing and/or Proposed Facilities:

The following will apply if the well is productive: Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (KMG). Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad.

A berm may be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed to hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with the BLM (typically Shadow Gray). A production facility layout is provided as part of a project- specific APD, ROW or NOS submission.

Gas Gathering

The gas gathering pipeline is made of steel line pipe, surface is bare pipe and buried is of coated with fusion bonded epoxy coating (or equivalent). The individual segments will be denoted in site-specific APDs.

Liquid Gathering

The individual segments will be denoted in site-specific APDs.

Pipeline Gathering Construction

Gas gathering pipeline(s,) gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. The road and/or well pad may be utilized for construction activities and staging when the pipeline is adjacent to the road or well pad. The area of disturbance during construction from

RECEIVED: July 07, 2014

the edge of road or well pad and for surface and buried pipelines including cross country will typically be 45' temporary disturbance. In addition, KMG requests a permanent 30'disturbance width that will be maintained for the portion adjacent to the road as well as cross country lines. The need for the 30' of permanent disturbance width is for maintenance and repairs.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. If installation cannot occur on the exact location, pipe may be constructed parallel and adjacent to a road and lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment. Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2" (typically fuel gas lines) to 24" (typically transportation lines) in diameter, but 6" to 16 "is typical for a buried gas line. The diameter of liquids pipelines may vary from 2" to 12", but 6"is the typical diameter. Gas lift lines may vary from 2" to 12" diameter, but 6" diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

When installing a buried pipeline, typically topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6', but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18"-48".

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radio-graphically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, KMG will apply all applicable Army Corps mandates as

RECEIVED: July 07, 2014

well as the BLM's Hydraulic Considerations for pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.

Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

When no longer deemed necessary by the operator, KMG or its successor will consult with the BLM, Vernal Field Office before terminating of the use of the pipeline(s).

The Anadarko Completions Transportation System (ACTS) information:

For individual APDs, refer to Exhibit C for the proposed placement of the ACTS temporary lines.

KMG will use either a closed loop drilling system that will require one pit and one storage area to be constructed on the drilling pad or a traditional drilling operation with one pit. The storage area will be used to contain only the de-watered drill cuttings and will be lined and reclaimed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion pit is lined and will be used for the wells drilled on the pad or used as part of our ACTS system which is discussed in more detail below. Using the closed loop drilling system will allow KMG to decrease the amount of disturbance/footprint on location compared to a single large drilling/completion pit.

If KMG does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit may be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system. KMG will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of completion fluids by utilizing existing reserve pits, or newly constructed completion pits, as well as temporary, surface-laid aluminum liquids transfer lines between pad locations. The pit will be refurbished as follows when a traditional drill pit is used, including mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. KMG will reline the pit with a 30 mil liner and double felt padding. The refurbished or newly constructed pit will be the same size or

RECEIVED: July 07, 2014

smaller as specified in the originally approved ROW/APD. The pit refurbish will be done in a normal procedure and there will be no modification to the pit. All four sides of the completions pit will be fenced in according to standard pit fencing procedures. Netting will be installed over all pits.

Any hydrocarbons collected will be treated and sold at approved sales facilities. A loading/ unloading rack with drip containment will also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit.

ACTS will require temporarily laying multiple 6 inch aluminum water transfer lines on the surface between either existing or refurbished reserve pits. The temporary aluminum transfer lines will be utilized to transport completion fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon conclusion of the completion operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. KMG will keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other completion jobs in the area. After one year KMG will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. KMG understands that due to the temporary nature of this system, BLM considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BLM.

E. Location and Types of Water Supply:

Water for drilling and completion operations will be obtained from the following sources:
JD Field Services:

Green River:	1087’ FSL & 1020’ FEL, Sec. 15 – T2N – R22E

RN Industries:

High Pressure:	705’ FNL & 675’ FWL, Sec. 1 – T6S – R22E
	1057’ FNL & 390’ FWL, Sec. 1 – T6S – R22E
	1239’ FNL & 52’ FEL, Sec. 6 – T6S – R23E
White River:	501’ FNL & 1676’ FEL, Sec. 9 – T8S – R20E
	471’ FNL & 1676’ FEL, Sec. 9 – T8S – R20E
	900’ FNL & 550’ FEL, Sec. 35 – T9S – R22E
	200’ FNL & 950’ FEL, Sec. 2 – T10S – R22E
	275’ FSL & 2275’ FEL, Sec. 2 – T10S – R22E
	122’ FSL & 1350’ FEL, Sec. 11 – T10S – R22E
	1670’ FSL & 500’ FEL, Sec. 12 – T10S – R22E

RECEIVED: July 07, 2014

	959’ FNL & 705’ FEL, Sec. 13 – T10S – R22E
	600’ FSL & 900’ FEL, Sec. 13 – T10S – R22E
Water Plant:	481’ FNL & 2176’ FEL, Sec. 9 – T8S – R20E
	471’ FNL & 2176’ FEL, Sec. 9 – T8S – R20E
Frog Pond:	4820’ FNL & 1200’ FWL, Sec. 33 – T8S – R20E
	4850’ FNL & 700’ FWL, Sec. 33 – T8S – R20E
Blue Tanks:	200’ FNL & 405’ FEL, Sec. 32 – T4S – R3E

Buggsy’s Water Source:
Green River: N 2090’ & W 30’ from E1/4 corner of Sec. 33 – T8S – R20E

Underground Water Well: N 1850’ & W 425’ from E1/4 corner of Sec. 33 – T8S – R20E

Water will be hauled to location over the roads marked in the individual APD’s Maps A and B.

F. Construction Materials:

Construction operations will typically be completed with native materials found on location. Construction materials imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source (described in site-specific documents). No construction materials will be removed from Federal lands without notifying the BLM. A proposed source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BLM.

G. Methods for Handling Waste:

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. KMG maintains a Spill Control and Countermeasure Plan for each applicable location, which includes notification requirements, to the BLM and other appropriate agencies, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of Comprehensive Environmental Response, Compensation, and Liability Act, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, KMG will comply with the notification requirements of NTL-3A.

Drill cuttings and/or drilling fluids may be contained in a reserve/completion pit whether a closed loop system is or isn’t utilized and cuttings may be buried in the pit(s) upon closure. Unless specifically approved by the BLM, no oil or other oil-based drilling additives,

RECEIVED: July 07, 2014

chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

If utilizing a closed loop system, drill cuttings and/or drilling fluids may be stored in above ground containers while on the location. All used drilling fluids may be hauled to Anadarko Petroleum Corporation's Mud Plant where it may be recycled for use at future well locations, hauled to a permitted disposal facility, or solidified for incorporation into the pad during interim reclamation practices. Drill cuttings from a closed loop system may be either hauled to an approved Utah Department of Oil, Gas and Mining Commercial Landfarm Disposal Facility or incorporated into the pad location during interim reclamation.

Pits will be constructed to eliminate the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Netting will be placed over pits before any liquids are discharged into pit. Should hydrocarbons be released into a reserve/completion pit, they will be removed as soon as practical and before the netting is removed from the pit. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

The reserve and/or completion pit will be lined with a synthetic material 30 mil or thicker liner. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per OSO 7. Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Revisions to the water source or method of transportation will be subject to written approval from the BLM.

Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after one year from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and

RECEIVED: July 07, 2014

the pit reclaimed. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse (trash and other solid waste including cans, paper, cable, etc.) generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced or netted to prevent wildlife or livestock entry.

Maximum distance between fence posts shall be no greater than 16 feet. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Materials Management

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term “hazardous materials” as used here means: (1) any substance, pollutant, or containment listed as hazardous under the CERCLA of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. KMG maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time.

RECEIVED: July 07, 2014

Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used. Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities (crude oil/condensate, produced water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Any produced water separated from recoverable condensate during well operations will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E
NBU #159 in Sec. 35 T9S R21E
Ace Oilfield in Sec. 2 T6S R20E
MC&MC in Sec. 12 T6S R19E
Pipeline Facility in Sec. 36 T9S R20E
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E
Bonanza Evaporation Pond in Sec. 2 T10S R23E

Or to one of the following KMG active Salt Water Disposal (SWD) wells:

NBU 159 SWD in Sec. 35 T9S R21E
CIGE 112D SWD in Sec. 19 T9S R21E
CIGE 114 SWD in Sec. 34 T9S R21E
NBU 921-34K SWD in Sec. 34 T9S R21E
NBU 921-33F SWD in Sec. 34 T9S R21E

H. Ancillary Facilities:

If additional ancillary facilities are planned they will be depicted on site specific APDs.

I. Well Site Layout:

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable.

Site-specific conditions may require slight deviation in actual equipment depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of disturbance will not exceed the maximum disturbance outlined in the attached exhibits of the APDs.

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production/Produced Liquid tanks will be constructed,

RECEIVED: July 07, 2014

maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BLM.

J. Plans for Surface Reclamation:

The surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. Interim reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils material, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation
Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, incorporation of cuttings, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BLM for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. Stockpiled drill cuttings may also be incorporated into the spoils, recontoured, and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left “rough” after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit. Disposal of pit fluids and linings is discussed in Section G.

Final Reclamation

RECEIVED: July 07, 2014

Final reclamation will be performed for unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BLM will be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as close as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site and prior to replacing topsoil, final grading and site preparation will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth no greater than 6 inches on 18 to 24-inch centers and the surface soil material will be uniformly pitted with longitudinal depressions perpendicular to the natural flow of water where practical. Following site preparation, topsoil will be spread on the location and prepared for seeding.

Reclamation of roads will be performed at the discretion of the BLM. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 6 to 24 inches where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications of the BLM.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to the BLM.

Measures Common to Interim and Final Reclamation

Soil tillage will be conducted using a disk in areas needing additional seedbed preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur during optimal soil conditions and will typically be accomplished through the use of a no-till rangeland style seed drill with a “picker box.” Additionally an imprinter seeder may be used. An imprinter seeder creates divots to roughen the surface and collect moisture to aid in seed germination. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The seed mixes will be selected from a list provided by or approved by the BLM, or a specific seed mix will be proposed by KMG to the BLM and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be

RECEIVED: July 07, 2014

maintained by KMG. Every effort will be made to obtain “cheat grass free seed” and noxious weed free seed.

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

Bonanza Area Mix	**Pure Live Seed lbs/acre**
Crested Wheat (Hycrest)	1.5
Bottlebrush Squirreltail	1
Western Wheatgrass (Arriba)	1
Thick Spike Wheatgrass	1.5
Indian Ricegrass	1
Fourwing Saltbush	2
Shadscale	2
Forage Kochia	0.25
Rocky Mountain Bee Plant	0.5
Total	10.75

Natural Buttes Area Mix Option 1:	**Pure Live Seed lbs/acre**
Indian Ricegrass (Nezpar)	3
Thick Spike Wheatgrass	2
Sandberg bluegrass	0.5
Bottlebrush squirreltail	1
Crested wheatgrass (Hycrest)	1
Winterfat	0.25
Shadscale	1.5
Four-wing saltbush	0.75
Forage Kochia	0.25
Total	10.25

Natural Buttes Area Mix Option 2:	**Pure Live Seed lbs/acre**

RECEIVED: July 07, 2014

Galleta Grass	0.5
Great Basin Wildrye	0.5
Thickspike Wheatgrass	2.5
Indian Ricegrass (Nezpar)	1
Crested Wheatgrass	1
Siberian Wheatgrass	1
Bottlebrush Squirreltail	1
Munro Globemallow	0.1
Palmer Penstemon	0.1
Rocky Mtn beeplant	0.5
Western yarrow	0.1
Shadscale	0.5
Forage Kochia	0.5
Total	9.3

Natural Buttes Area Mix Option 3:	**Pure Live Seed lbs/acre**
Galleta Grass	2
Sandberg bluegrass	0.5
Shadscale	0.5
Bluebunch (secar)	2
Indian Ricegrass (Nezpar)	2
Western Wheatgrass (Arriba)	2
Palmer penstemon	0.25
Munro Globemallow	0.15
Black Sage	0.25
Winterfat	0.25
Forage Kochia	0.25
Total	10.15

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage. Soil amendments such as “Sustain” (an organic fertilizer that will be applied at the rate 1,800 – 2,100 lbs/acre with seed) may also be dry broadcast or applied with hydro-seeding equipment.

RECEIVED: July 07, 2014

Weed Control

All weed management will be done in accordance with the Vernal BLM Surface Disturbance Weed Policy. Noxious weeds will be controlled, as applicable, on project areas. Monitoring and management of noxious and/or invasive weeds of concern will be completed annually until the project is deemed successfully reclaimed by the surface management agency and/or owner according to the Anadarko Integrated Weed Management Plan. Noxious weed infestations will be mapped using a GPS unit and submitted to the BLM with information required in the Vernal BLM Surface Disturbance Weed Policy. If herbicide is to be applied it will be done according to an approved Pesticide Use Proposal (PUP), inclusive of applicable locations. All pesticide applications will be recorded using a Pesticide Application Record (PAR) and will be submitted along with a Pesticide Use Report (PUR) annually prior to Dec. 31.

Monitoring

Monitoring of reclaimed project areas will be completed annually during the growing season and actions to ensure reclamation success will be taken as needed. During the first two growing seasons an ocular methodology will be used to determine the success of the reclamation activities. During the 3rd growing season a 100 point line intercept (quantitative) methodology will be used to obtain basal cover. The goal is to have the reclaimed area reach 30% basal cover when compared to the reference site. If after three growing seasons the area has not reached 30% basal cover, additional reclamation activities may be necessary. Monitoring will continue until the reclaimed area reaches 75% basal cover of desirable vegetation when compared to the reference site. (Green River District Reclamation Guidelines).

All monitoring reports will be submitted electronically to the Vernal BLM in the form of a geo-database no later than March 1st of the calendar year following the data collection.

K. Surface/Mineral Ownership:

Depicted on site specific APDs.

L. Other Information:

Cultural and Paleontological Resources

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and KMG will provide immediate notification to the BLM or appropriate SMA.

Resource Reports

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Appropriate archaeological and paleontological reconnaissance surveys and biological field surveys will be completed and provide to the BLM for individual APDs.

Proposed Action Annual Emissions Tables:

Appendix A through G contains the emission table per pad based on well count.

M. Lessee's or Operators' Representative & Certification:

Depicted on site specific APDs.

Appendix A:

Proposed Action Annual Emissions Tables: 4 Well Pad

Table 1: Proposed Action Annual Emissions (tons/year)[1]

Pollutant	Development	Production	Total
NOx	3.8	1.2	5
CO	2.2	1.08	3.28
VOC	0.1	6.8	6.9
SO_2	0.005	0.01	0.02
PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

RECEIVED: July 07, 2014

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	5	16,547	0.03%
VOC	6.9	127,495	0.01%

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html

Uintah Basin Data

Appendix B:

Proposed Action Annual Emissions Tables: 5 Well Pad

Table 1: Proposed Action Annual Emissions (tons/year)[1]

Pollutant	Development	Production	Total
NOx	3.8	1.5	5.3
CO	2.2	1.08	3.28
VOC	0.1	8.5	8.6
SO_2	0.005	0.01	0.02
PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

RECEIVED: July 07, 2014

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	5.3	16,547	0.03%
VOC	8.6	127,495	0.01%

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

Appendix C:

Proposed Action Annual Emissions Tables: 6 Well Pad

Table 1: Proposed Action Annual Emissions (tons/year)[1]

Pollutant	Development	Production	Total
NOx	3.8	1.8	5.6
CO	2.2	1.08	3.28
VOC	0.1	10.2	10.3
SO_2	0.005	0.01	0.02
PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	5.6	16,547	0.03%
VOC	10.3	127,495	0.01%

RECEIVED: July 07, 2014

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

Appendix D:

Proposed Action Annual Emissions Tables: 7 Well Pad

Table 1: Proposed Action Annual Emissions (tons/year)[1]

Pollutant	Development	Production	Total
NOx	3.8	2.1	5.9
CO	2.2	1.08	3.28
VOC	0.1	11.9	12
SO_2	0.005	0.01	0.02
PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	5.9	16,547	0.03%
VOC	12	127,495	0.01%

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

Appendix E:

Proposed Action Annual Emissions Tables: 8 Well Pad

Table 1: Proposed Action Annual Emissions (tons/year)[1]

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Pollutant	Development	Production	Total
NOx	3.8	2.4	6.2
CO	2.2	1.08	3.28
VOC	0.1	13.6	13.7
SO_2	0.005	0.01	0.02
PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	6.2	16,547	0.03%
VOC	13.7	127,495	0.01%

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

Appendix F:

Proposed Action Annual Emissions Tables: 10 Well Pad

Table 1: Proposed Action Annual Emissions (tons/year)[1]

Pollutant	Development	Production	Total
NOx	3.8	3	6.8
CO	2.2	1.08	3.28
VOC	0.1	17	17.1
SO_2	0.005	0.01	0.02

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PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	6.8	16,547	0.03%
VOC	17.1	127,495	0.01%

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

Appendix G:

Proposed Action Annual Emissions Tables: 12 Well Pad

Table 1: Proposed Action Annual Emissions (tons/year)[1]

Pollutant	Development	Production	Total
NOx	3.8	3.6	7.4
CO	2.2	1.08	3.28
VOC	0.1	20.4	20.5
SO_2	0.005	0.01	0.02
PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.05	0.45

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Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	7.4	16,547	0.03%
VOC	20.5	127,495	0.01%

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

Appendix G:

Proposed Action Annual Emissions Tables: 15 Well Pad

Table 1: Proposed Action Annual Emissions (tons/year)[1]

Pollutant	Development	Production	Total
NOx	3.8	4.5	8.3
CO	2.2	1.08	3.28
VOC	0.1	25.5	25.6
SO_2	0.005	0.01	0.02
PM_{10}	1.7	0.11	1.81
$PM_{2.5}$	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

RECEIVED: July 07, 2014

[1] Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory[a] (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	8.3	16,547	0.03%
VOC	25.6	127,495	0.01%

[a] http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html Uintah Basin Data

RECEIVED: July 07, 2014

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
440 West 200 South, Suite 500
Salt Lake City, UT 84101

IN REPLY REFER TO:
3160
(UT-922)

July 14, 2014

Memorandum

To: Assistant Field Office Manager Minerals,
Vernal Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2014 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Mason, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2014 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
NBU 921-19A PAD		
43-047-54560	NBU 921-19A1BS	Sec 19 T09S R21E 0785 FNL 0751 FEL BHL Sec 19 T09S R21E 0086 FNL 0532 FEL
43-047-54583	NBU 921-19A1CS	Sec 19 T09S R21E 0784 FNL 0741 FEL BHL Sec 19 T09S R21E 0414 FNL 0534 FEL
43-047-54584	NBU 921-29A4CS	Sec 19 T09S R21E 0787 FNL 0761 FEL BHL Sec 19 T09S R21E 1077 FNL 0533 FEL
43-047-54585	NBU 921-19A4BS	Sec 19 T09S R21E 0782 FNL 0731 FEL BHL Sec 19 T09S R21E 0746 FNL 0533 FEL
43-047-54586	NBU 921-19H1BS	Sec 19 T09S R21E 0789 FNL 0771 FEL BHL Sec 19 T09S R21E 1408 FNL 0533 FEL
NBU 1022-9J PAD		
43-047-54561	NBU 1022-9H3AS	Sec 09 T10S R22E 1926 FSL 1766 FEL BHL Sec 09 T10S R22E 2219 FNL 0671 FEL
43-047-54562	NBU 1022-9G4CS	Sec 09 T10S R22E 1917 FSL 1784 FEL BHL Sec 09 T10S R22E 2359 FNL 1825 FEL
43-047-54563	NBU 1022-9I1DS	Sec 09 T10S R22E 1922 FSL 1775 FEL BHL Sec 09 T10S R22E 1980 FSL 0301 FEL
43-047-54564	NBU 1022-9I1BS	Sec 09 T10S R22E 1931 FSL 1757 FEL BHL Sec 09 T10S R22E 2331 FSL 0493 FEL
43-047-54565	NBU 1022-9H4CS	Sec 09 T10S R22E 1935 FSL 1748 FEL BHL Sec 09 T10S R22E 2613 FNL 0492 FEL

RECEIVED: July 16, 2014

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
NBU 1022-9G PAD		
43-047-54566	NBU 1022-9G1CS	Sec 09 T10S R22E 1685 FNL 2300 FEL
		BHL Sec 09 T10S R22E 1670 FNL 1691 FEL
43-047-54567	NBU 1022-9F2BS	Sec 09 T10S R22E 1688 FNL 2319 FEL
		BHL Sec 09 T10S R22E 1369 FNL 1379 FWL
43-047-54568	NBU 1022-9C1CS	Sec 09 T10S R22E 1687 FNL 2309 FEL
		BHL Sec 09 T10S R22E 0482 FNL 2341 FWL
NBU 1022-9A PAD		
43-047-54569	NBU 1022-9A4BS	Sec 09 T10S R22E 0390 FNL 0496 FEL
		BHL Sec 09 T10S R22E 0912 FNL 0491 FEL
NBU 921-19B PAD		
43-047-54587	NBU 921-19B4CS	Sec 19 T09S R21E 0546 FNL 2076 FEL
		BHL Sec 19 T09S R21E 1103 FNL 1961 FEL
43-047-54588	NBU 921-19G1BS	Sec 19 T09S R21E 0547 FNL 2086 FEL
		BHL Sec 19 T09S R21E 1470 FNL 1962 FEL
43-047-54589	NBU 921-19B1CS	Sec 19 T09S R21E 0545 FNL 2056 FEL
		BHL Sec 19 T09S R21E 0416 FNL 1976 FEL
43-047-54590	NBU 921-19B1BS	Sec 19 T09S R21E 0545 FNL 2066 FEL
		BHL Sec 19 T09S R21E 0078 FNL 1958 FEL
NBU 921-19C PAD		
43-047-54591	NBU 921-19C1BS	Sec 19 T09S R21E 0522 FNL 2164 FWL
		BHL Sec 19 T09S R21E 0088 FNL 2323 FWL

This office has no objection to permitting the wells at this time.

Michael Coulthard

Digitally signed by Michael Coulthard
DN: cn=Michael Coulthard, o=Bureau of Land Management, ou=Division of Minerals, email=mcoultha@blm.gov, c=US
Date: 2014.07.14 12:38:09 -06'00'

bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

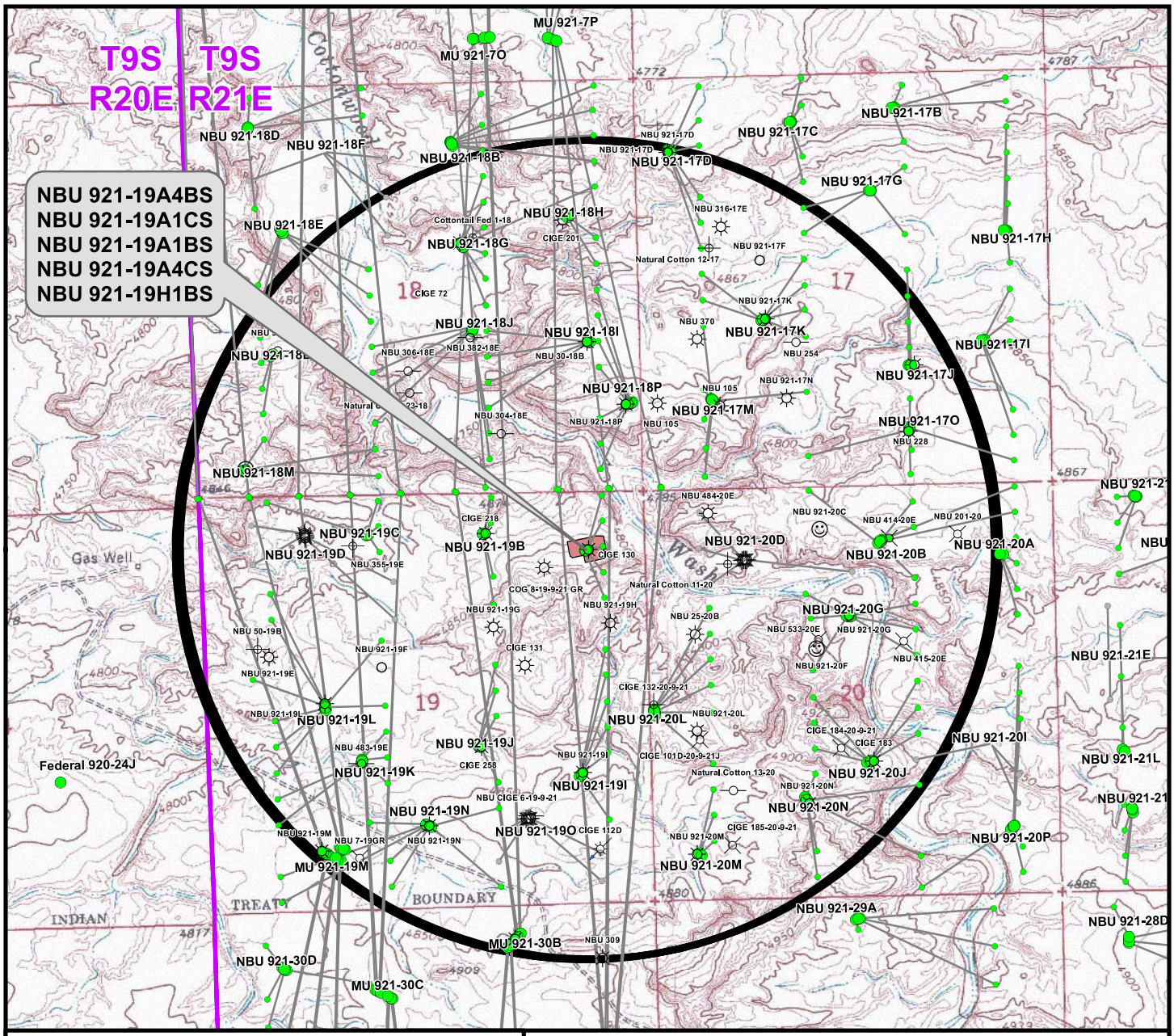
MCoulthard:mc:7-14-14

RECEIVED: July 16, 2014

API Number	Well Name	Surface Location
43-047-54560	NBU 921-19A1BS	Sec 19 T09S R21E 0785 FNL 0751 FEL
43-047-54561	NBU 1022-9H3AS	Sec 09 T10S R22E 1926 FSL 1766 FEL
43-047-54562	NBU 1022-9G4CS	Sec 09 T10S R22E 1917 FSL 1784 FEL
43-047-54563	NBU 1022-9I1DS	Sec 09 T10S R22E 1922 FSL 1775 FEL
43-047-54564	NBU 1022-9I1BS	Sec 09 T10S R22E 1931 FSL 1757 FEL
43-047-54565	NBU 1022-9H4CS	Sec 09 T10S R22E 1935 FSL 1748 FEL
43-047-54566	NBU 1022-9G1CS	Sec 09 T10S R22E 1685 FNL 2300 FEL
43-047-54567	NBU 1022-9F2BS	Sec 09 T10S R22E 1688 FNL 2319 FEL
43-047-54568	NBU 1022-9C1CS	Sec 09 T10S R22E 1687 FNL 2309 FEL
43-047-54569	NBU 1022-9A4BS	Sec 09 T10S R22E 0390 FNL 0496 FEL
43-047-54583	NBU 921-19A1CS	Sec 19 T09S R21E 0784 FNL 0741 FEL
43-047-54584	NBU 921-29A4CS	Sec 19 T09S R21E 0787 FNL 0761 FEL
43-047-54585	NBU 921-19A4BS	Sec 19 T09S R21E 0782 FNL 0731 FEL
43-047-54586	NBU 921-19H1BS	Sec 19 T09S R21E 0789 FNL 0771 FEL
43-047-54587	NBU 921-19B4CS	Sec 19 T09S R21E 0546 FNL 2076 FEL
43-047-54588	NBU 921-19G1BS	Sec 19 T09S R21E 0547 FNL 2086 FEL
43-047-54589	NBU 921-19B1CS	Sec 19 T09S R21E 0545 FNL 2056 FEL
43-047-54590	NBU 921-19B1BS	Sec 19 T09S R21E 0545 FNL 2066 FEL
43-047-54591	NBU 921-19C1BS	Sec 19 T09S R21E 0522 FNL 2164 FWL

RECEIVED: July 16, 2014

API Well Number: 43047545860000



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 921-19A4BS	CIGE 130	191ft
NBU 921-19A1CS	CIGE 130	411ft
NBU 921-19A1BS	CIGE 130	719ft
NBU 921-19A4CS	CIGE 130	352ft
NBU 921-19H1BS	NBU 921-19H	333ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 921-19A

TOPO C
NBU 921-19A4BS,
NBU 921-19A1CS, NBU 921-19A1BS,
NBU 921-19A4CS & NBU 921-19H1BS
LOCATED IN SECTION 19, T9S, R21E
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO:	13
DRAWN: TL	DATE: 28 Sep 2012		13 OF 17
REVISED: TL	DATE: 17 Dec 2013		

File: K:\ANADARKO\2012\2012_76_NBU_921-19-30_FOCUS\GIS\Maps_ABCDE\NBU 921-19A\NBU 921-19A_C.mxd, 10/3/2012 10:59:00 AM

Received: July 07, 2014

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 921-19A Pad
Well: NBU 921-19A1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 921-19A1BS

GL 4856 & KB 4 @ 4860.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14538910.11	2035986.80	40.0267164	-109.5870179

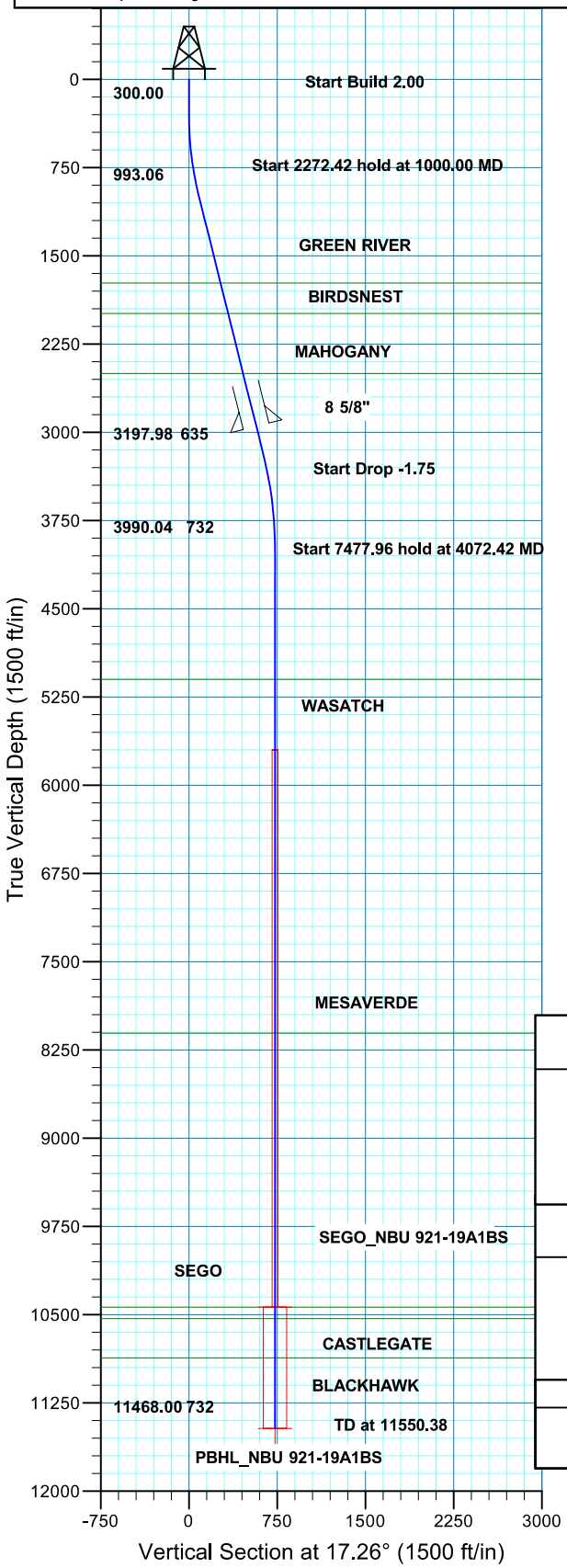
DESIGN TARGET DETAILS

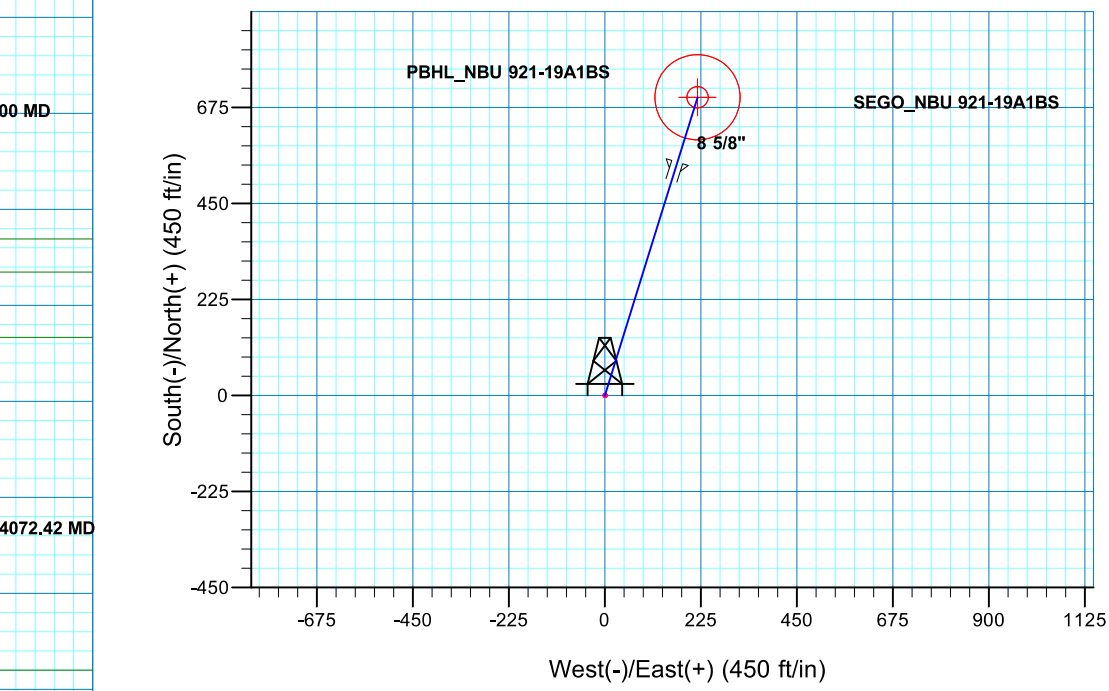
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	10436.00	699.12	217.25	14539612.58	2036192.93	40.0286360	-109.5862420	Circle (Radius: 25.00)
- plan hits target center								
PBHL	11468.00	699.12	217.25	14539612.58	2036192.93	40.0286360	-109.5862420	Circle (Radius: 100.00)
- plan hits target center								

T M

Azimuths to True North
Magnetic North: 10.89°

Magnetic Field
Strength: 52011.0snT
Dip Angle: 65.80°
Date: 2013/11/11
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1000.00	14.00	17.26	993.06	81.26	25.25	2.00	17.26	85.10	
3272.42	14.00	17.26	3197.98	606.25	188.39	0.00	0.00	634.85	
4072.42	0.00	0.00	3990.04	699.12	217.25	1.75	180.00	732.10	
11550.38	0.00	0.00	11468.00	699.12	217.25	0.00	0.00	732.10	PBHL_NBU 921-19A1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTON 19 T9S R21E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1731.00	1760.54	GREEN RIVER
1990.00	2027.46	BIRDSNEST
2499.00	2552.05	MAHOGANY
5101.00	5183.38	WASATCH
8108.00	8190.38	MESAVERDE
10436.00	10518.38	SEGO
10533.00	10615.38	CASTLEGATE
10868.00	10950.38	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2949.00	3015.82	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 921-19A1BS/OH)
Created By: RobertScott Date: 7:19, November 12 2013

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 921-19A Pad
Well: NBU 921-19A1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 921-19A1CS

GL 4856 @ KB 4 @ 4860.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14538912.08	2035996.57	40.0267214	-109.5869829

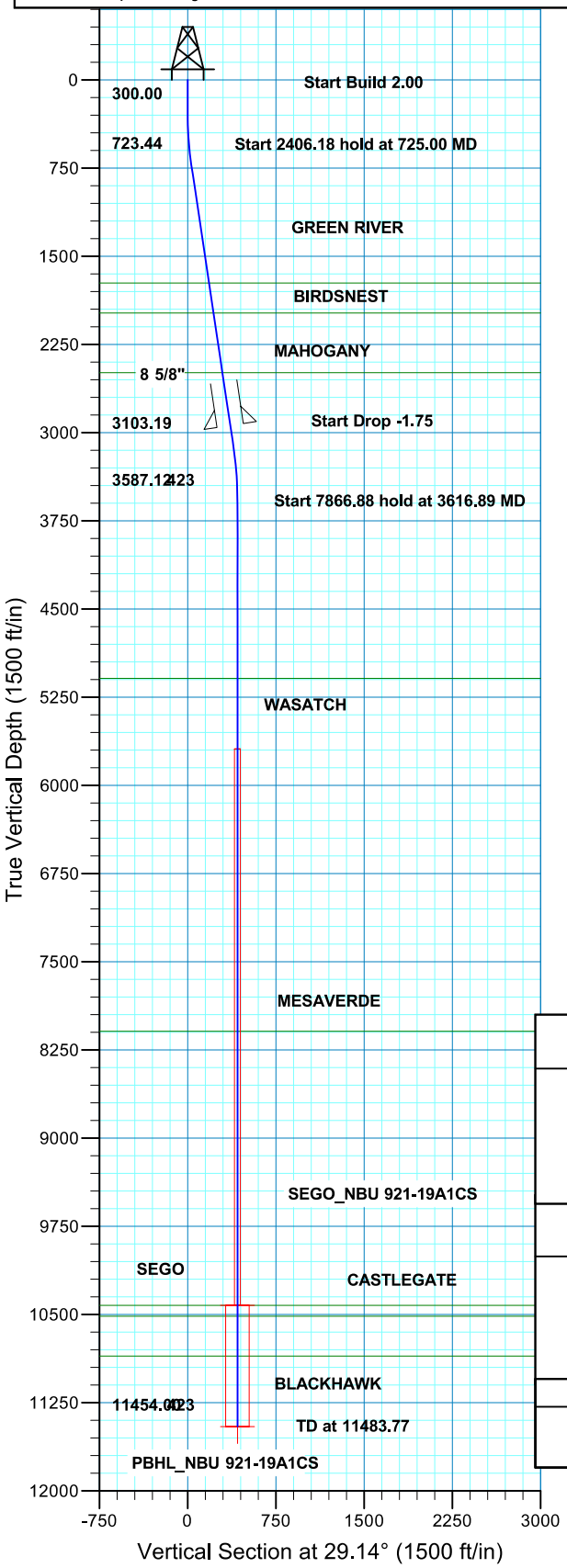
DESIGN TARGET DETAILS

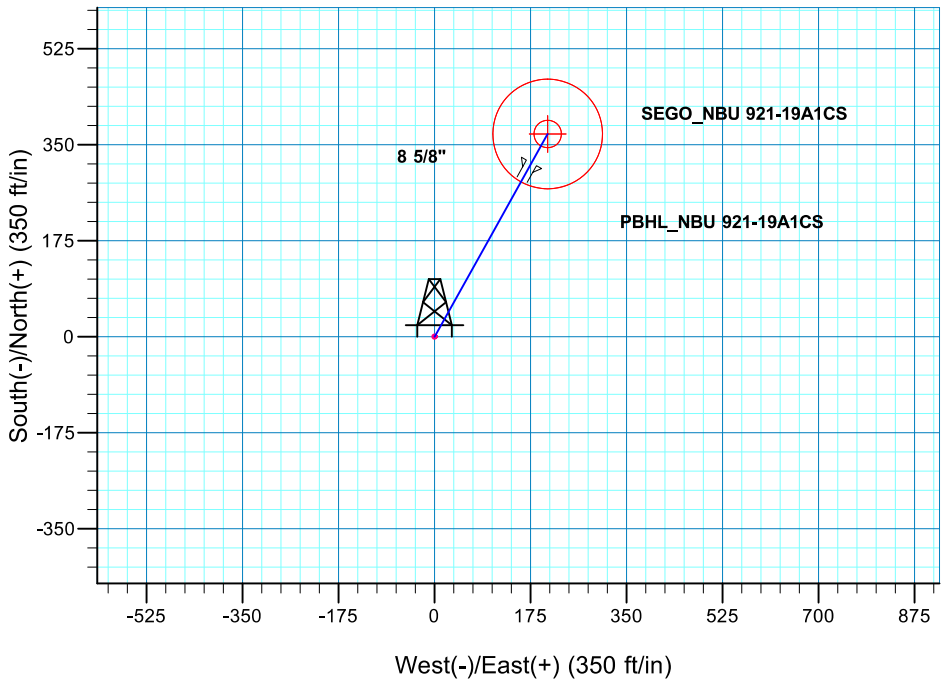
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	10423.00	369.52	206.05	14539284.82	2036196.73	40.0277360	-109.5862470	Circle (Radius: 25.00)
- plan hits target center								
PBHL	11454.00	369.52	206.05	14539284.82	2036196.73	40.0277360	-109.5862470	Circle (Radius: 100.00)
- plan hits target center								

T M

Azimuths to True North
Magnetic North: 10.89°

Magnetic Field
Strength: 52011.0snT
Dip Angle: 65.80°
Date: 2013/11/11
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
725.00	8.50	29.14	723.44	27.48	15.33	2.00	29.14	31.47	
3131.18	8.50	29.14	3103.19	338.11	188.53	0.00	0.00	387.12	
3616.89	0.00	0.00	3587.12	369.52	206.05	1.75	180.00	423.09	
11483.77	0.00	0.00	11454.00	369.52	206.05	0.00	0.00	423.09	PBHL_NBU 921-19A1CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTON 19 T9S R21E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1728.00	1740.71	GREEN RIVER
1984.00	1999.56	BIRDSNEST
2490.00	2511.18	MAHOGANY
5090.00	5119.77	WASATCH
8092.00	8121.77	MESAVERDE
10423.00	10452.77	SEGO
10515.00	10544.77	CASTLEGATE
10854.00	10883.77	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2940.00	2966.17	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 921-19A1CS/OH)
Created By: RobertScott Date: 7:20, November 12 2013

RECEIVED: July 07, 2014

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 921-19A Pad
Well: NBU 921-19A4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 921-19A4CS

GL 4856 & KB 4 @ 4860.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14538908.13	2035977.03	40.0267114	-109.5870529

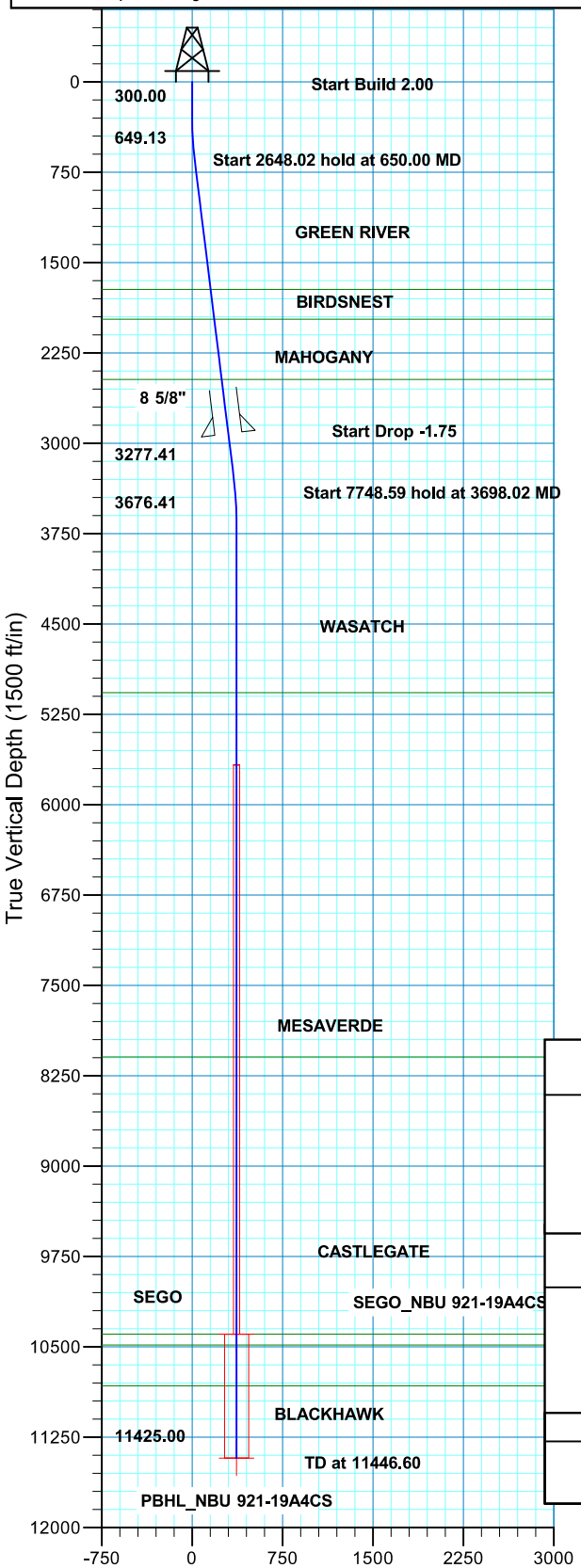
DESIGN TARGET DETAILS

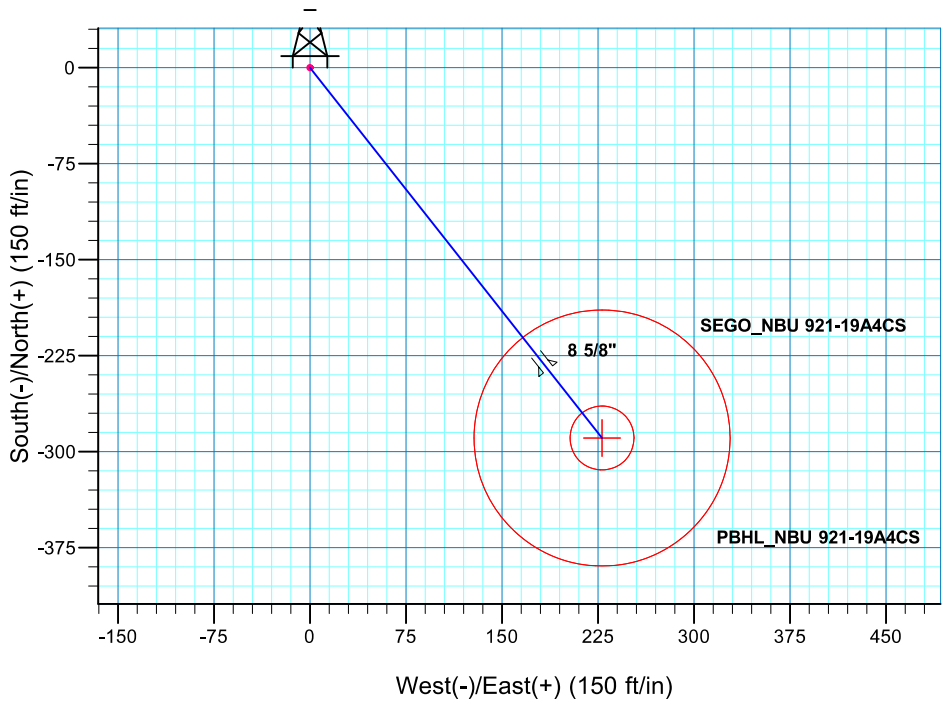
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	10396.00	-289.32	228.17	14538622.47	2036209.76	40.0259170	-109.5862380	Circle (Radius: 25.00)
- plan hits target center								
PBHL	11425.00	-289.32	228.17	14538622.47	2036209.76	40.0259170	-109.5862380	Circle (Radius: 100.00)
- plan hits target center								

T M

Azimuths to True North
Magnetic North: 10.89°

Magnetic Field
Strength: 52011.0snT
Dip Angle: 65.80°
Date: 2013/11/11
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
650.00	7.00	141.74	649.13	-16.77	13.22	2.00	141.74	21.35	
3298.02	7.00	141.74	3277.41	-270.16	213.06	0.00	0.00	344.07	
3698.02	0.00	0.00	3676.41	-289.32	228.17	1.75	180.00	368.47	
11446.60	0.00	0.00	11425.00	-289.32	228.17	0.00	0.00	368.47	PBHL_NBU 921-19A4CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTON 19 T9S R21E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1723.00	1731.93	GREEN RIVER
1970.00	1980.79	BIRDSNEST
2471.00	2485.55	MAHOGANY
5070.00	5091.60	WASATCH
8095.00	8116.60	MESAVERDE
10396.00	10417.60	SEGO
10485.00	10506.60	CASTLEGATE
10825.00	10846.60	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2921.00	2938.93	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 921-19A4CS/OH)
Created By: RobertScott Date: 7:24, November 12 2013

RECEIVED: July 07, 2014

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 921-19A Pad
Well: NBU 921-19A4BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 921-19A4BS

GL 4856 & KB 4 @ 4860.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14538914.06	2036006.34	40.0267264	-109.5869479

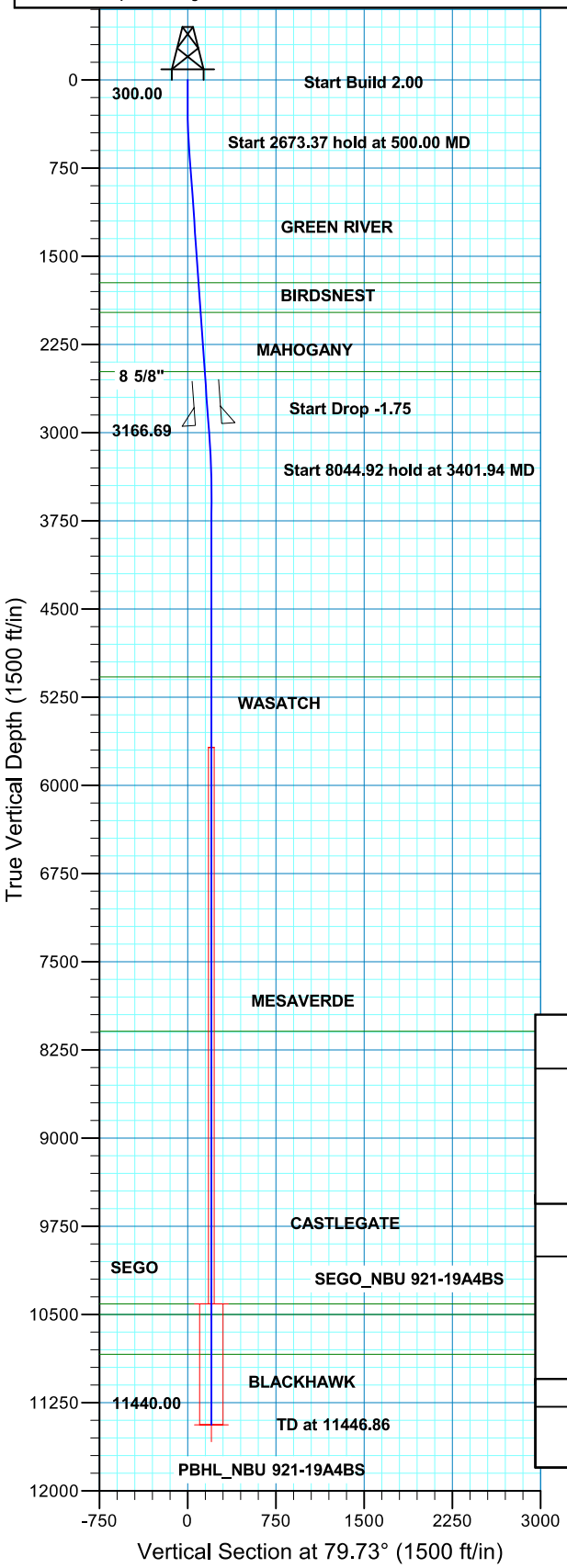
DESIGN TARGET DETAILS

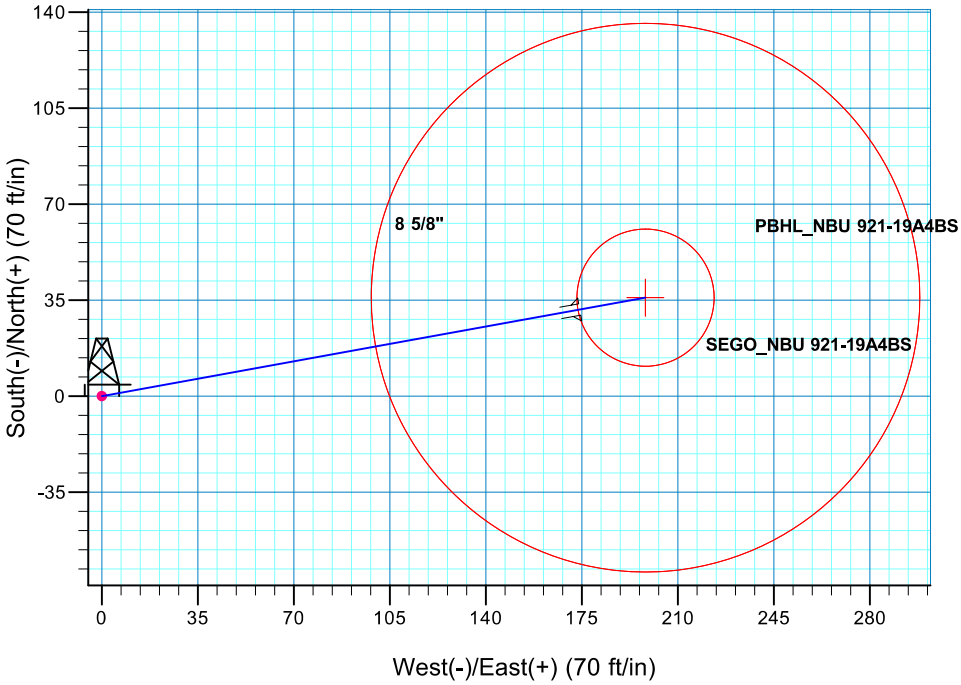
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	10410.00	35.91	198.21	14538953.11	2036203.95	40.0268250	-109.5862400	Circle (Radius: 25.00)
- plan hits target center								
PBHL	11440.00	35.91	198.21	14538953.11	2036203.95	40.0268250	-109.5862400	Circle (Radius: 100.00)
- plan hits target center								

T M

Azimuths to True North
Magnetic North: 10.89°

Magnetic Field
Strength: 52011.0snT
Dip Angle: 65.80°
Date: 2013/11/11
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
500.00	4.00	79.73	499.84	1.24	6.87	2.00	79.73	6.98	
3173.37	4.00	79.73	3166.69	34.49	190.36	0.00	0.00	193.46	
3401.94	0.00	0.00	3395.08	35.91	198.21	1.75	180.00	201.44	
11446.86	0.00	0.00	11440.00	35.91	198.21	0.00	0.00	201.44	PBHL_NBU 921-19A4BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTON 19 T9S R21E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1725.00	1728.15	GREEN RIVER
1977.00	1980.77	BIRDSNEST
2482.00	2487.00	MAHOGANY
5078.00	5084.86	WASATCH
8091.00	8097.86	MESAVERDE
10410.00	10416.86	SEGO
10501.00	10507.86	CASTLEGATE
10840.00	10846.86	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2932.00	2938.10	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 921-19A4BS/OH)
Created By: RobertScott Date: 7:22, November 12 2013

Received: July 07, 2014

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 921-19A Pad
Well: NBU 921-19H1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 921-19H1BS

G 4856 & KB 4 @ 4860.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14538906.15	2035966.98	40.0267064	-109.5870889

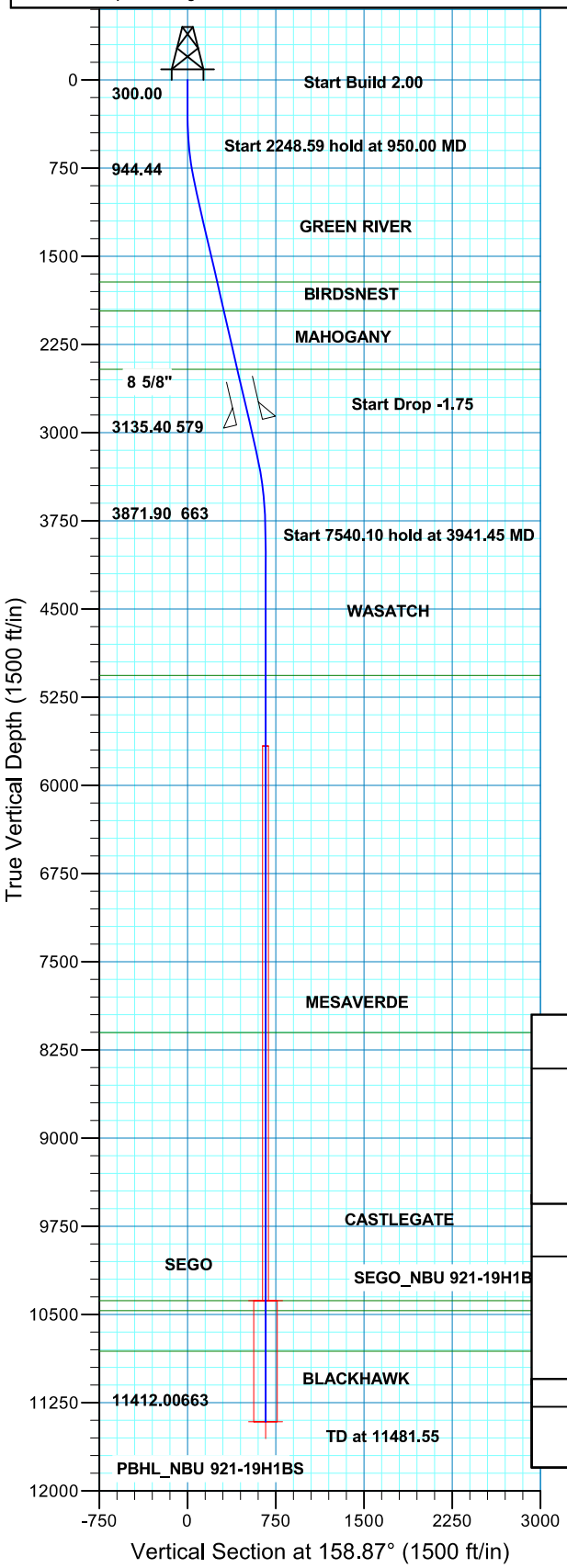
DESIGN TARGET DETAILS

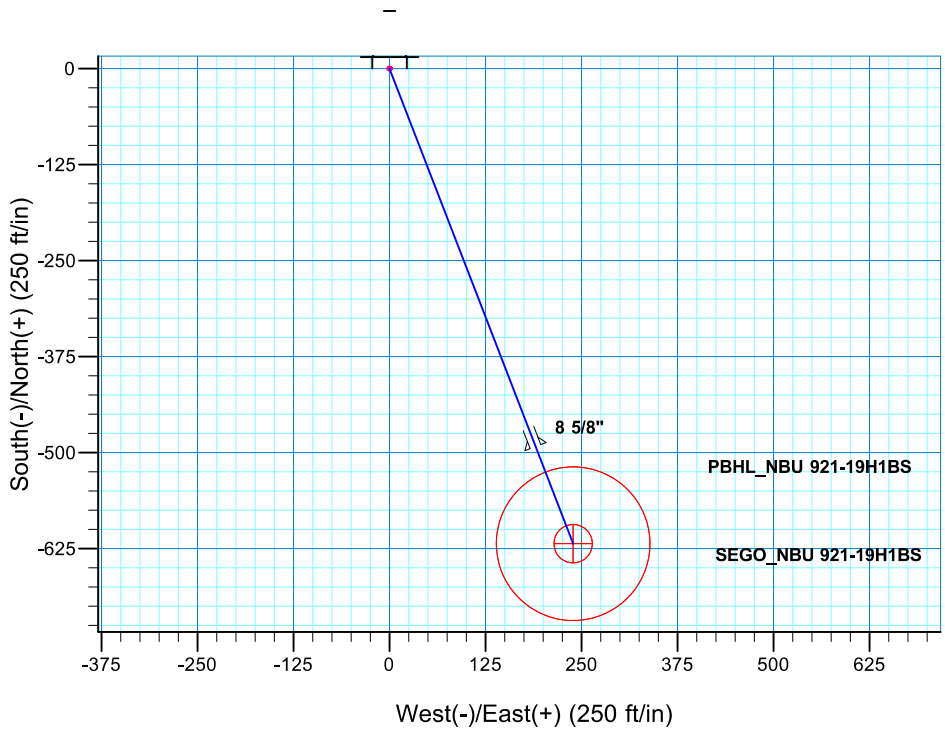
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	10383.00	-618.56	239.10	14538291.46	2036215.86	40.0250080	-109.5862350	Circle (Radius: 25.00)
- plan hits target center								
PBH	11412.00	-618.56	239.10	14538291.46	2036215.86	40.0250080	-109.5862350	Circle (Radius: 100.00)
- plan hits target center								

T M

Azimuths to True North
Magnetic North: 10.89°

Magnetic Field
Strength: 52011.0snT
Dip Angle: 65.80°
Date: 2013/11/11
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
950.00	13.00	158.87	944.44	-68.49	26.47	2.00	158.87	73.42	
3198.59	13.00	158.87	3135.40	-540.29	208.84	0.00	0.00	579.25	
3941.45	0.00	0.00	3871.90	-618.56	239.10	1.75	180.00	663.16	
11481.55	0.00	0.00	11412.00	-618.56	239.10	0.00	0.00	663.16	PBHL_NBU 921-19H1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTON 19 T9S R21E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1719.00	1744.94	GREEN RIVER
1966.00	1998.43	BIRDSNEST
2462.00	2507.48	MAHOGANY
5066.00	5135.55	WASATCH
8104.00	8173.55	MESAVERDE
10383.00	10452.55	SEGO
10468.00	10537.55	CASTLEGATE
10812.00	10881.55	BLACKHAWK

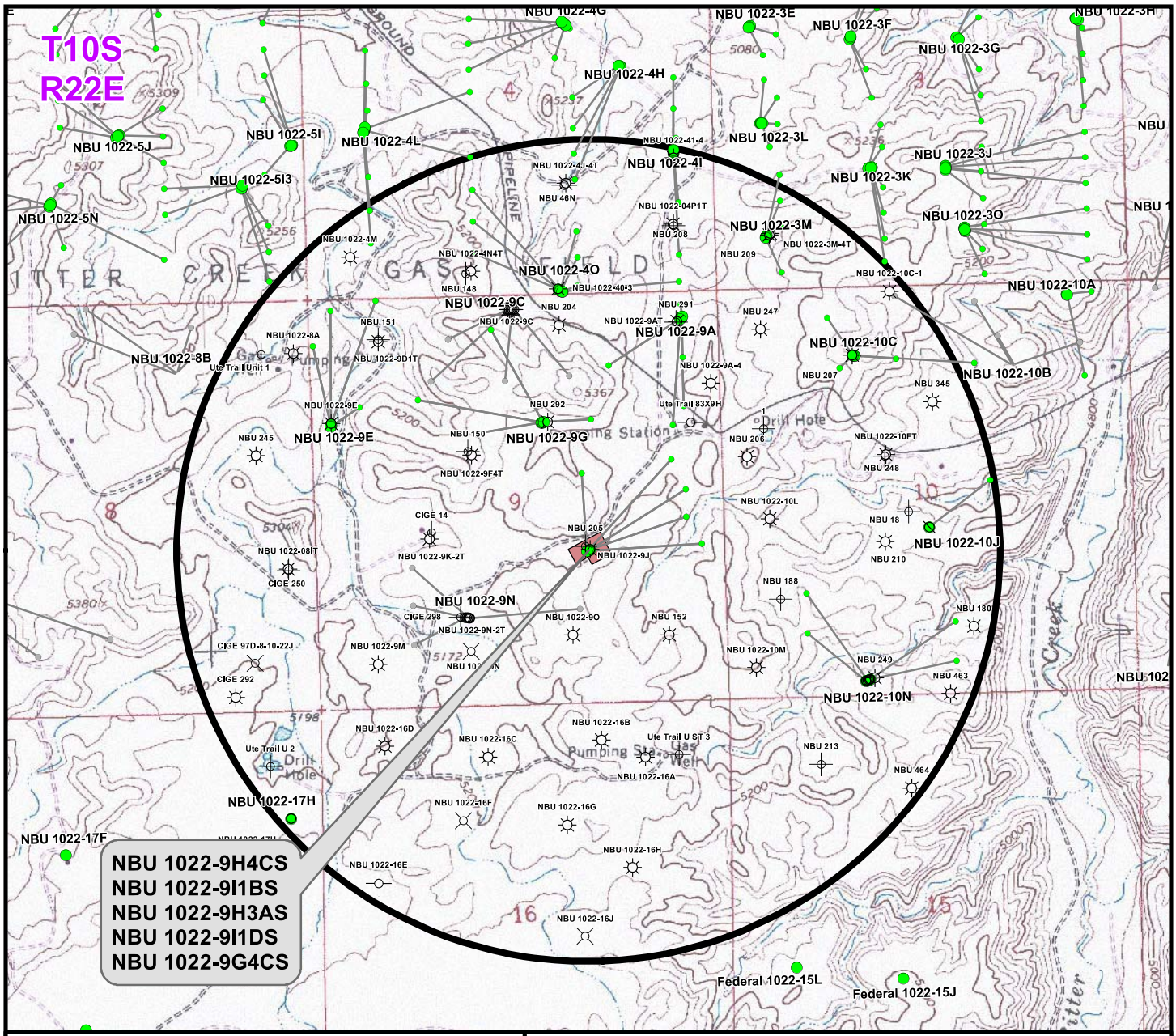
CASING DETAILS

TVD	MD	Name	Size
2912.00	2969.32	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 921-19H1BS/OH)
Created By: RobertScott Date: 7:26, November 12 2013

RECEIVED: July 07, 2014

API Well Number: 43047545860000



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-9H4CS	Ute Trail 83X9H	±873ft
NBU 1022-9I1BS	NBU 1022-10L	±1,069ft
NBU 1022-9H3AS	Ute Trail 83X9H	±543ft
NBU 1022-9I1DS	NBU 1022-10L	±924ft
NBU 1022-9G4CS	NBU 292	±790ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 1022-9J

TOPO C
NBU 1022-9H4CS,
NBU 1022-9I1BS, NBU 1022-9H3AS,
NBU 1022-9I1DS & NBU 1022-9G4CS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 13
DRAWN: TL	DATE: 18 Nov 2013	13 OF 17
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9J\NBU 1022-9J_C.mxd11/22/2013 2:27:50 PM

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9J PAD
Well: NBU 1022-9H3AS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51975.1snT
Dip Angle: 65.77°
Date: 1/6/2014
Model: BGGM2013

WELL DETAILS: NBU 1022-9H3AS

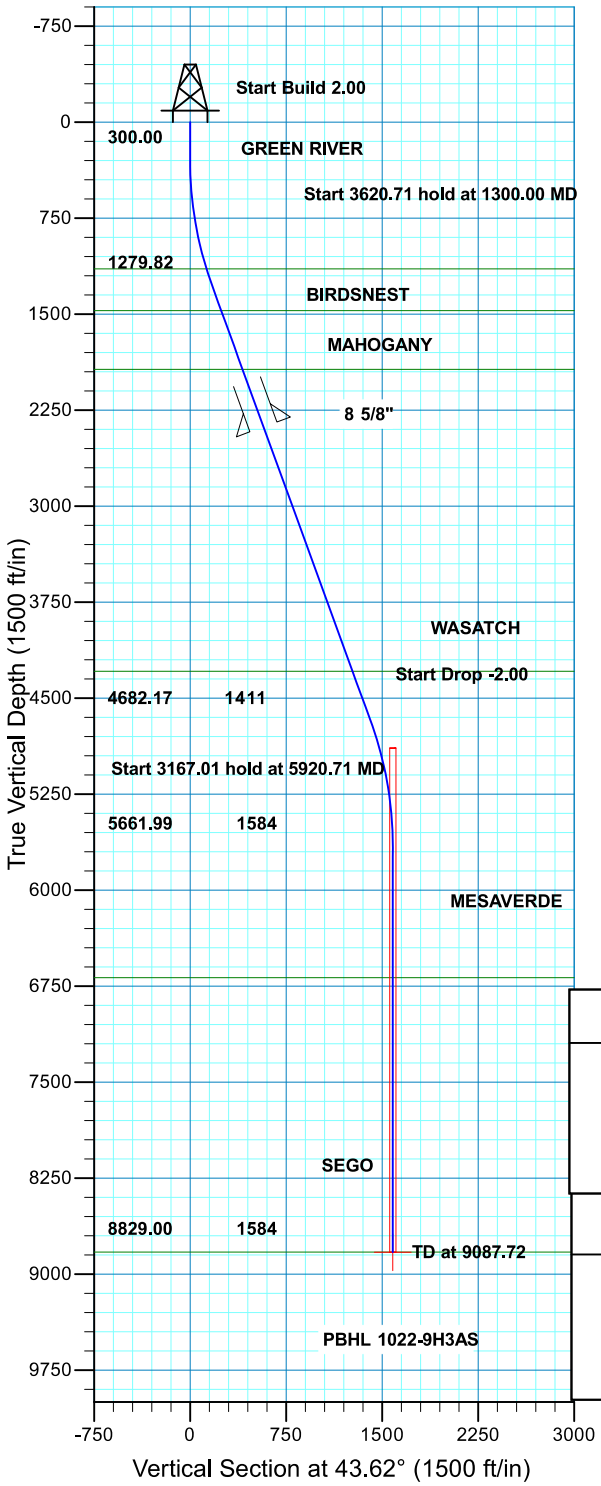
GL 5208 & KB 4 @ 5212.00ft (ASSUMED)

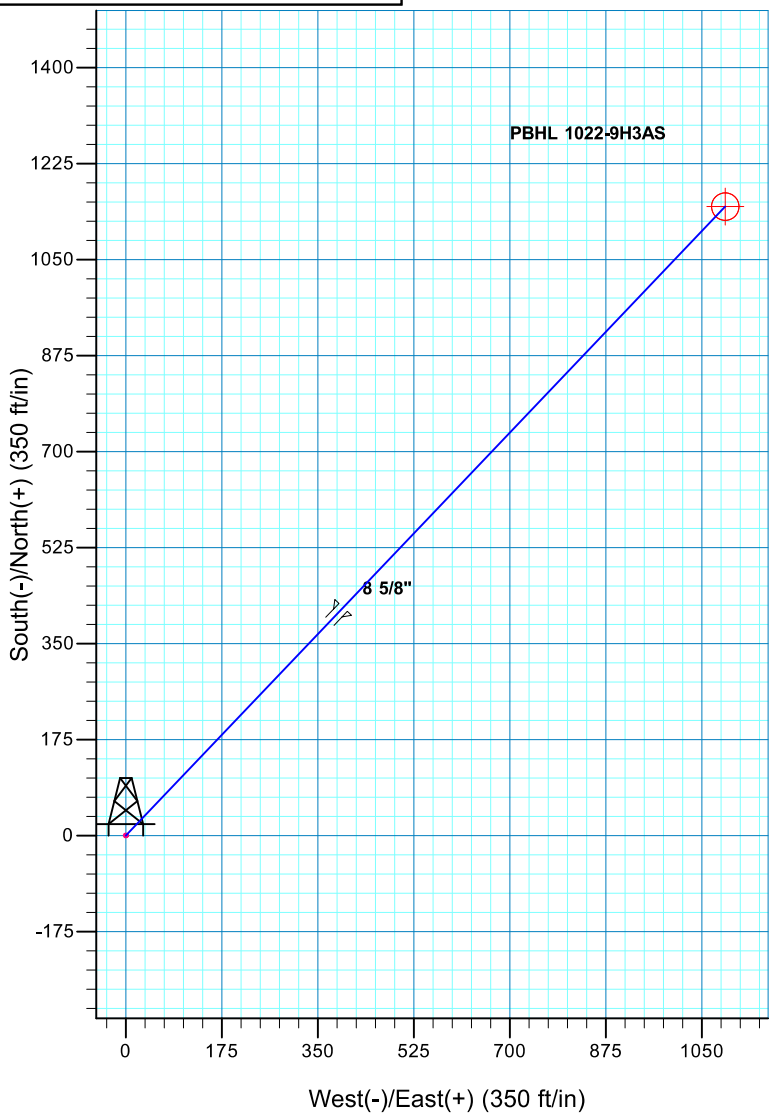
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14515870.92	2077289.01	39.9615760	-109.4409740

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8829.00	1146.56	1092.75	14517036.41	2078361.56	39.9647240	-109.4370750	Circle (Radius: 25.00)

- plan hits target center





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	43.62	1279.82	125.07	119.20	2.00	43.62	172.77	
4920.71	20.00	43.62	4682.17	1021.50	973.56	0.00	0.00	1411.12	
5920.71	0.00	0.00	5661.99	1146.56	1092.75	2.00	180.00	1583.89	
9087.72	0.00	0.00	8829.00	1146.56	1092.75	0.00	0.00	1583.89	PBHL 1022-9H3AS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	
1147.00	1159.85	GREEN RIVER	
1473.00	1505.58	BIRDSNEST	
1933.00	1995.10	MAHOGANY	
4290.00	4503.37	WASATCH	
6684.00	6942.72	MESAVERDE	
8828.99	9087.71	SEGO	0.00

Plan: PLAN #1 PRELIMINARY (NBU 1022-9H3AS/OH)
Created By: Robert Scott Date: 12:59 January 06 2014

RECEIVED: July 02, 2014

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9J PAD
Well: NBU 1022-9G4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 1022-9G4CS

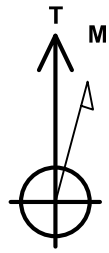
GL 5208 & KB 4 @ 5212.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14515861.51	2077271.24	39.9615510	-109.4410380

DESIGN TARGET DETAILS

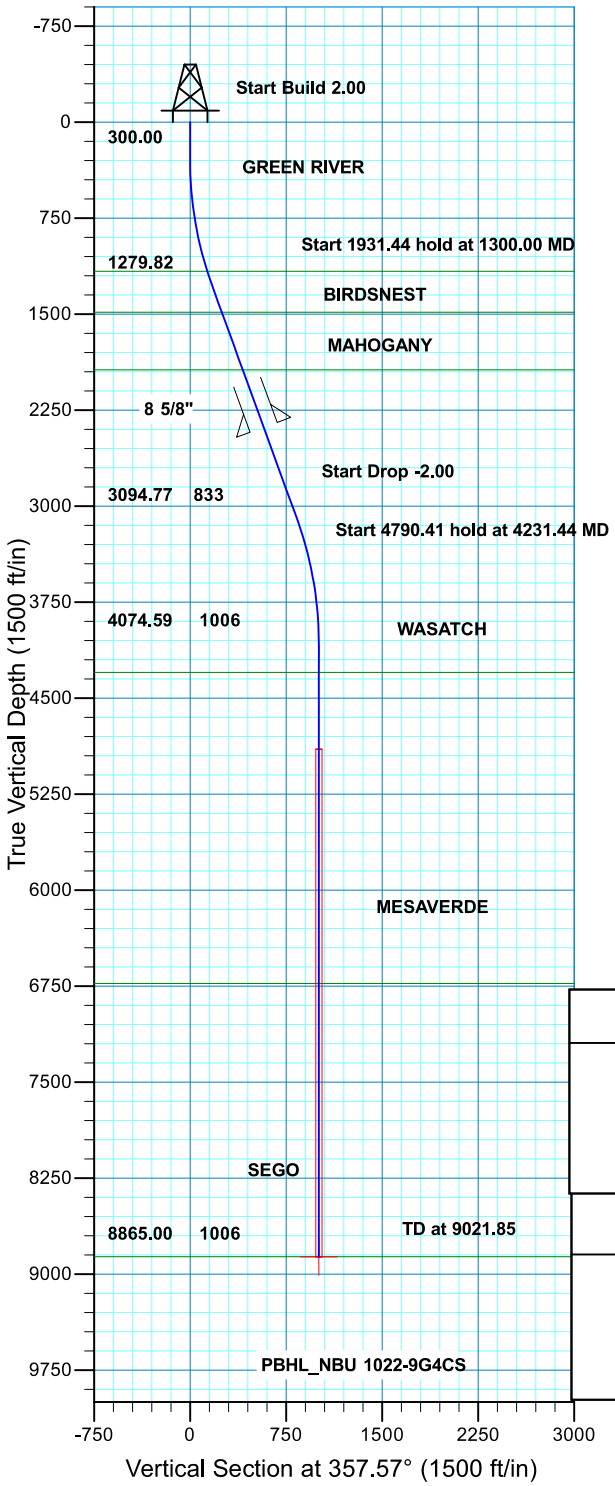
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8865.00	1005.22	-42.60	14516865.83	2077211.08	39.9643110	-109.4411900	Circle (Radius: 25.00)

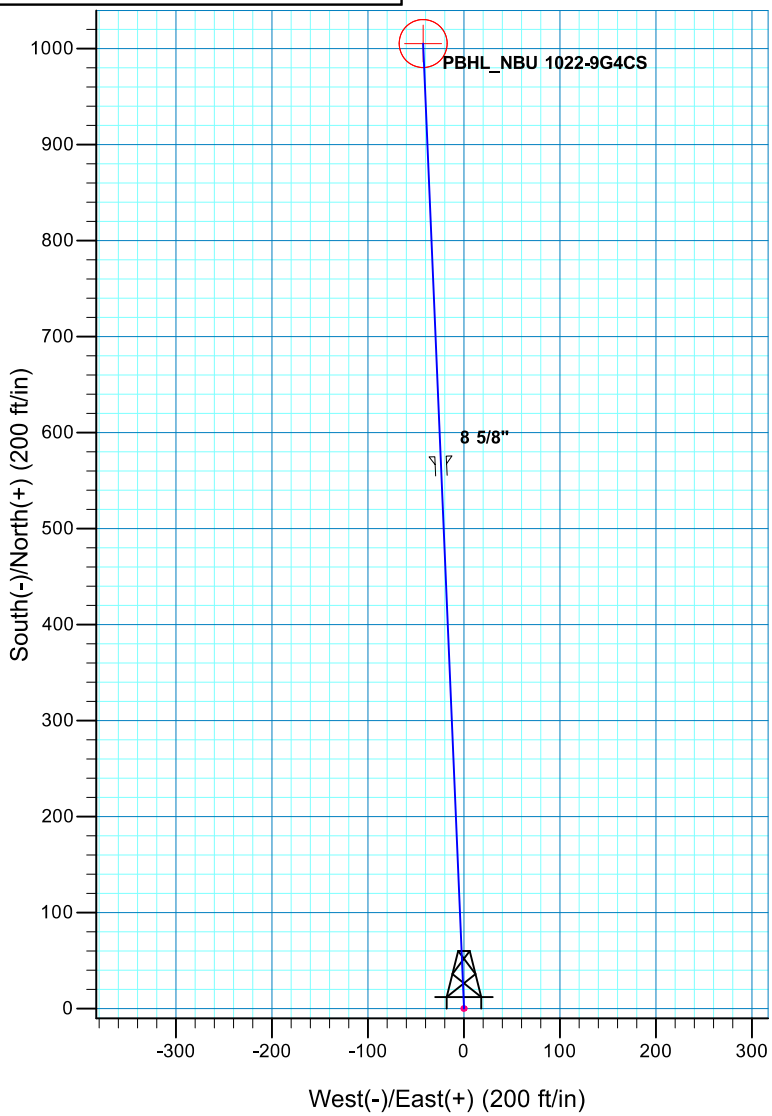
- plan hits target center



Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51975.1snT
Dip Angle: 65.77°
Date: 1/6/2014
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
1300.00	20.00	357.57	1279.82	172.61	-7.32	2.00	357.57	172.77
3231.44	20.00	357.57	3094.77	832.61	-35.28	0.00	0.00	833.36
4231.44	0.00	0.00	4074.59	1005.22	-42.60	2.00	180.00	1006.13
9021.85	0.00	0.00	8865.00	1005.22	-42.60	0.00	0.00	1006.13

PBHL_NBU 1022-9G4CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	
1166.00	1179.76	GREEN RIVER	
1485.00	1518.35	BIRDSNEST	
1936.00	1998.30	MAHOGANY	
4300.00	4456.85	WASATCH	
6730.00	6886.85	MESAVERDE	
8864.99	9021.84	SEGO	0.00

Plan: PLAN #1 PRELIMINARY (NBU 1022-9G4CS/OH)
Created By: Robert Scott Date: 12:56, January 06 2014

RECEIVED: July 02, 2014

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9J PAD
Well: NBU 1022-9I1DS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51975.1snT
Dip Angle: 65.77°
Date: 1/6/2014
Model: BGGM2013

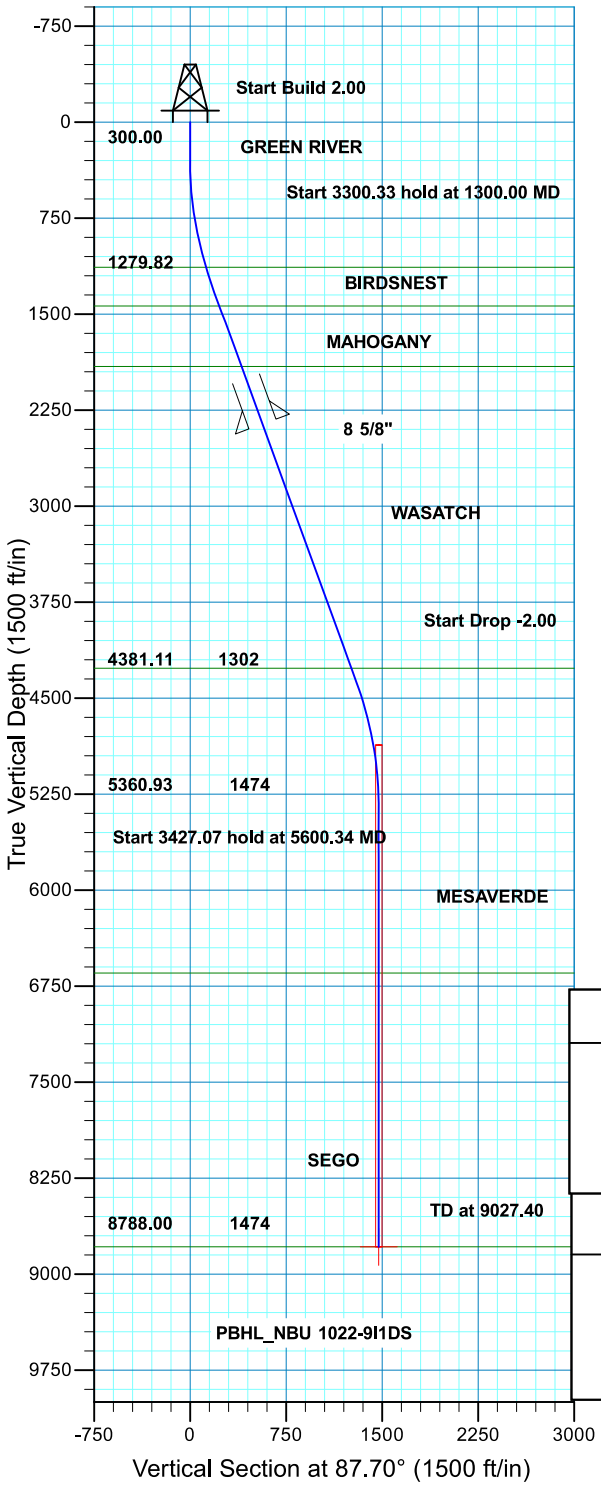
WELL DETAILS: NBU 1022-9I1DS

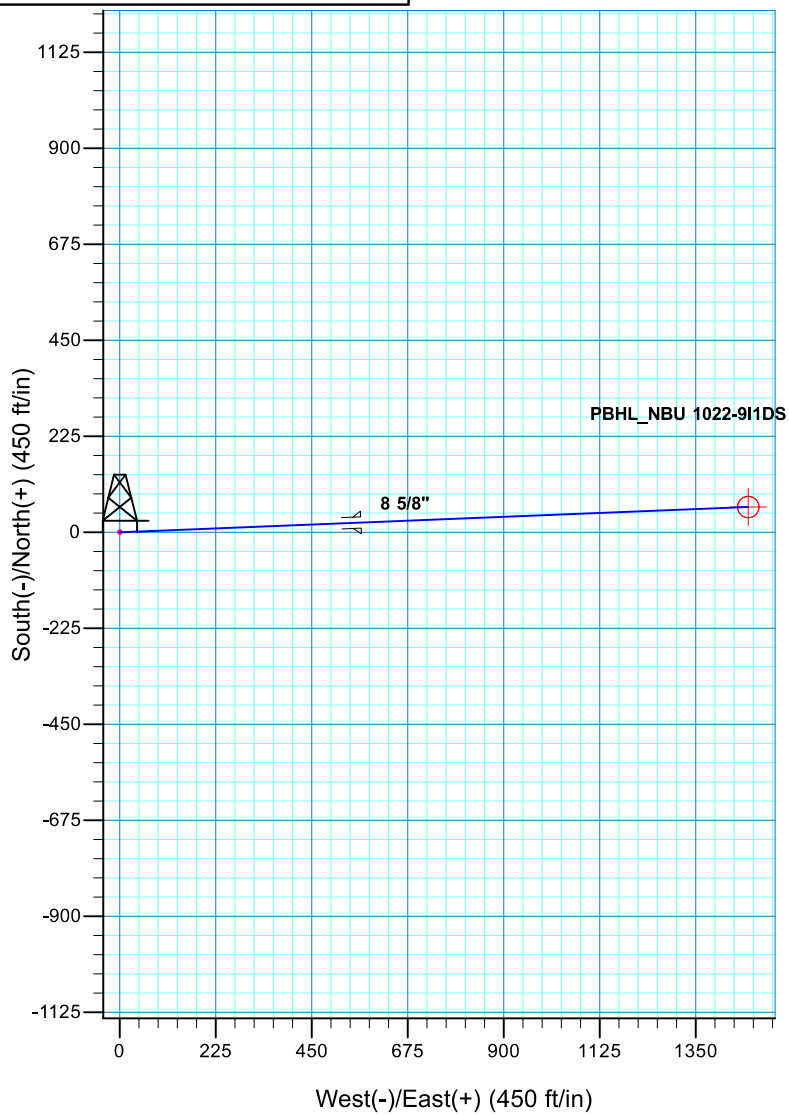
GL 5208 & KB 4 @ 5212.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14515866.03	2077280.13	39.9615630	-109.4410060

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL - plan hits target center	8788.00	59.04	1473.13	14515950.82	2078752.00	39.9617250	-109.4357500	Circle (Radius: 25.00)





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	87.70	1279.82	6.92	172.63	2.00	87.70	172.77	
4600.33	20.00	87.70	4381.11	52.13	1300.50	0.00	0.00	1301.55	
5600.34	0.00	0.00	5360.93	59.04	1473.13	2.00	180.00	1474.32	
9027.40	0.00	0.00	8788.00	59.04	1473.13	0.00	0.00	1474.32	PBHL_NBU 1022-9I1DS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	
1134.00	1146.25	GREEN RIVER	
1437.00	1467.27	BIRDSNEST	
1910.00	1970.63	MAHOGANY	
4267.00	4478.90	WASATCH	
6648.00	6887.40	MESAVERDE	
8787.99	9027.39	SEGO	0.00

Plan: PLAN #1 PRELIMINARY (NBU 1022-9I1DS/OH)
Created By: Robert Scott Date: 13:06 January 06 2014

RECEIVED: July 02, 2014

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9J PAD
Well: NBU 1022-9I1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 1022-9I1BS

GL 5208 & KB 4 @ 5212.00ft (ASSUMED)

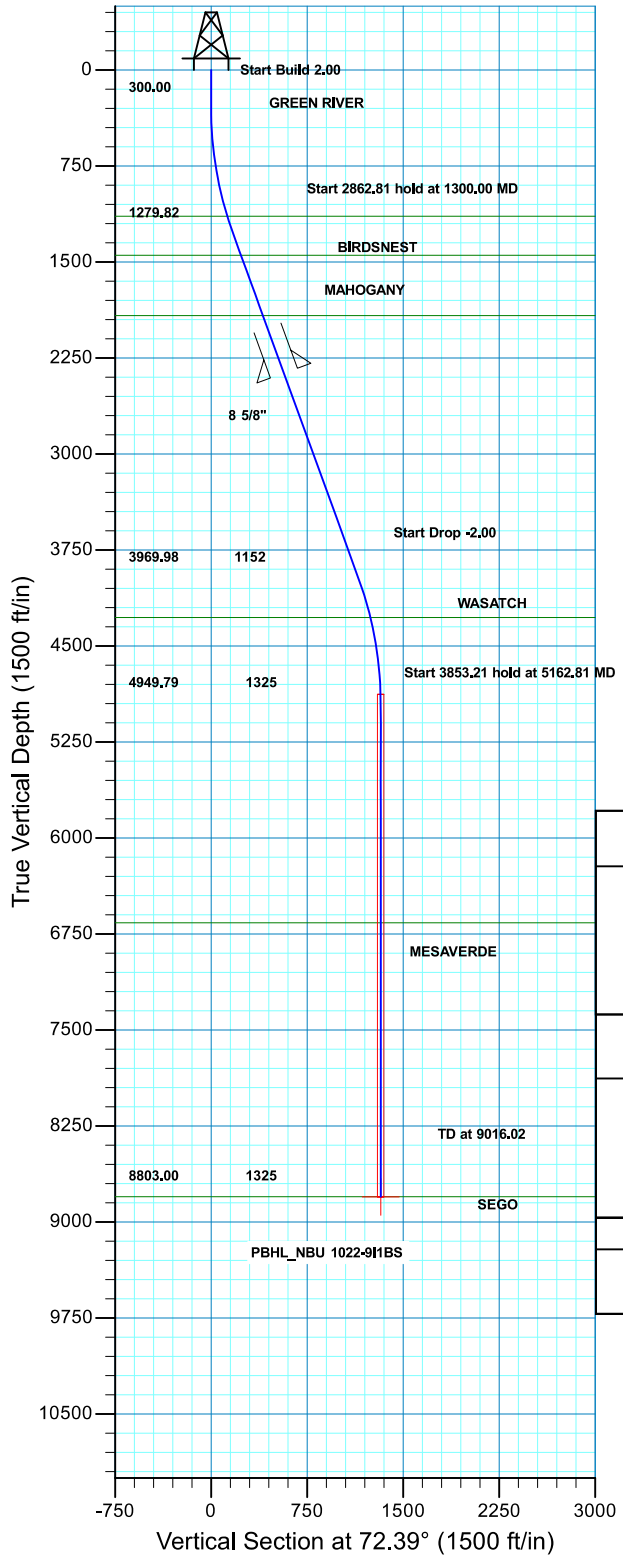
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14515875.45	2077297.91	39.9615880	-109.4409420

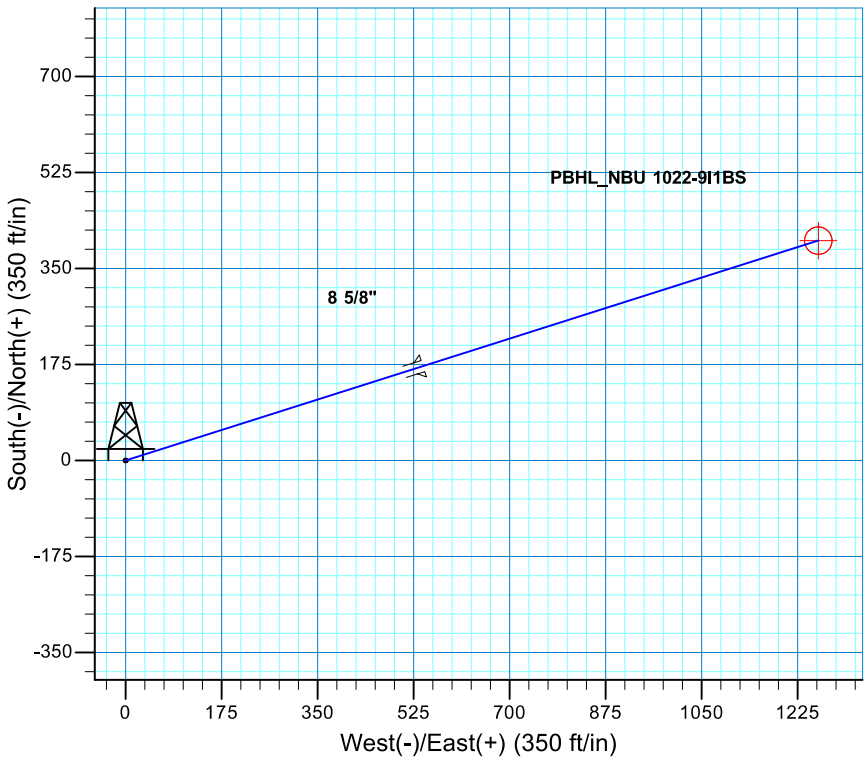
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8803.00	400.66	1262.63	14516298.12	2078553.34	39.9626880	-109.4364370	Circle (Radius: 25.00)
- plan hits target center								

T
M
Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51975.1snT
Dip Angle: 65.77°
Date: 2014/01/06
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	72.39	1279.82	52.26	164.68	2.00	72.39	172.77	
4162.81	20.00	72.39	3969.98	348.41	1097.95	0.00	0.00	1151.91	
5162.81	0.00	0.00	4949.79	400.66	1262.63	2.00	180.00	1324.67	
9016.02	0.00	0.00	8803.00	400.66	1262.63	0.00	0.00	1324.67	PBHL_NBU 1022-9I1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1141.00	1153.57	GREEN RIVER
1448.00	1478.98	BIRDSNEST
1918.00	1979.14	MAHOGANY
4276.00	4482.65	WASATCH
6661.00	6874.02	MESAVERDE
8802.99	9016.01	SEGO

CASING DETAILS

TVD	MD	Name	Size
2368.00	2458.02	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 1022-9I1BS/OH)
Created By: RobertScott Date: 11:4[illegible] January 17 2014

RECEIVED: July 02, 2014

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9J PAD
Well: NBU 1022-9H4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

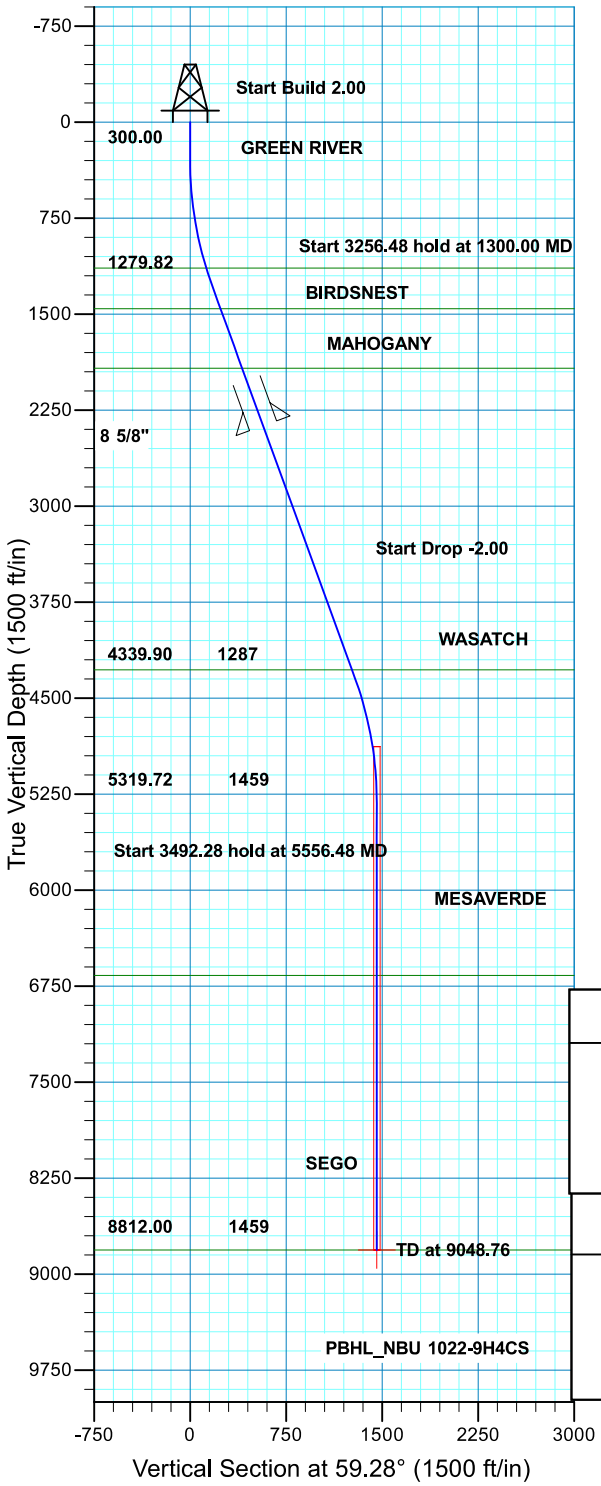
WELL DETAILS: NBU 1022-9H4CS					
GL 5208 & KB 4 @ 5212.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14515880.34	2077306.51	39.9616010	-109.4409110

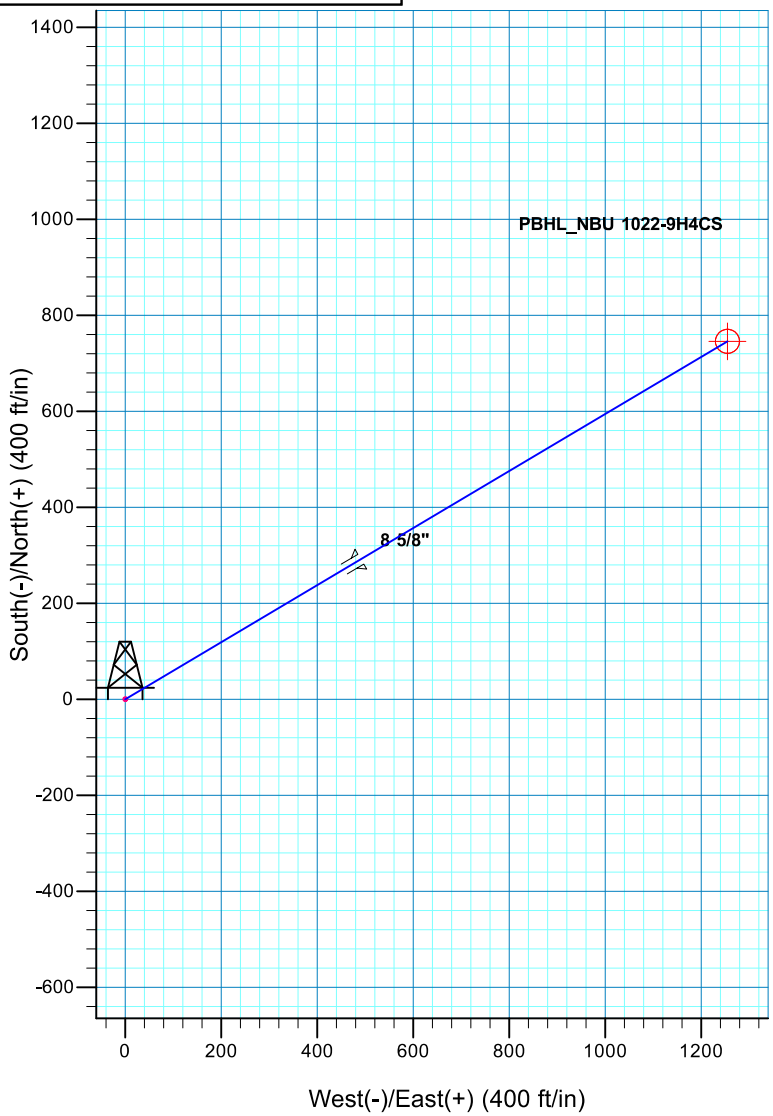
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8812.00	745.57	1254.48	14516647.72	2078547.77	39.9636480	-109.4364350	Circle (Radius: 25.00)
- plan hits target center								

T M

Azimuths to True North
Magnetic North: 10.72°

Magnetic Field
Strength: 52059.7snT
Dip Angle: 65.78°
Date: 1/6/2014
Model: IGRF2010





SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	59.28	1279.82	88.27	148.52	2.00	59.28	172.77	
4556.48	20.00	59.28	4339.90	657.30	1105.97	0.00	0.00	1286.55	
5556.48	0.00	0.00	5319.72	745.57	1254.48	2.00	180.00	1459.32	
9048.76	0.00	0.00	8812.00	745.57	1254.48	0.00	0.00	1459.32	PBHL_NBU 1022-9H4CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

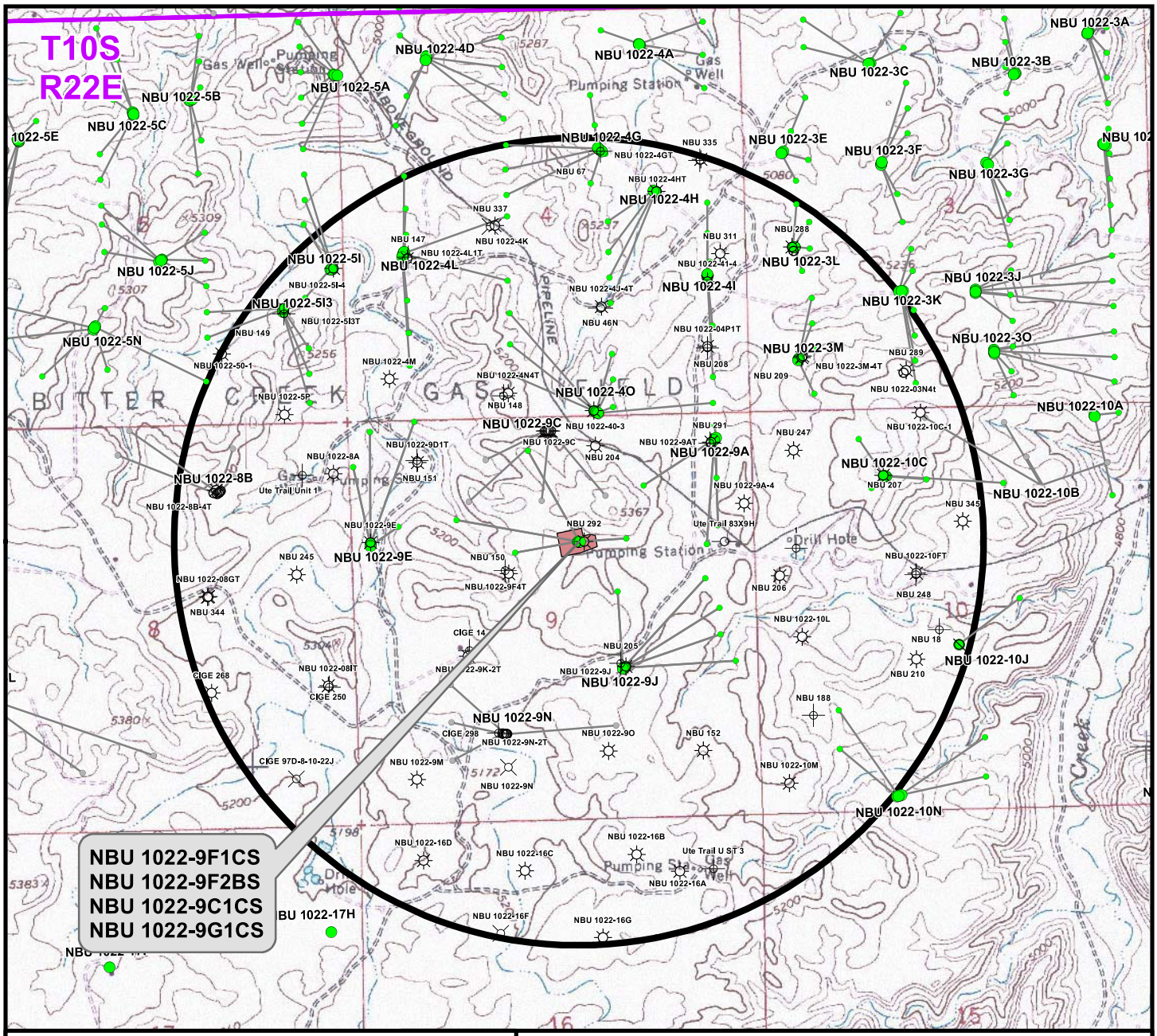
Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS			
TVDPath	MDPath	Formation	
1141.00	1153.57	GREEN RIVER	
1458.00	1489.62	BIRDSNEST	
1924.00	1985.53	MAHOGANY	
4280.00	4492.73	WASATCH	
6666.00	6902.76	MESAVERDE	
8811.99	9048.75	SEGO	0.00

Plan: PLAN #1 PRELIMINARY (NBU 1022-9H4CS/OH)
Created By: Robert Scott Date: 13:00, January 06 2014

RECEIVED: July 02, 2014

API Well Number: 43047545860000



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-9F1CS	NBU 150	±268ft
NBU 1022-9F2BS	NBU 1022-9C3CS BH	±291ft
NBU 1022-9C1CS	NBU 1022-9C	±365ft
NBU 1022-9G1CS	NBU 292	±558ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 1022-9G

TOPO C
NBU 1022-9F1CS, NBU 1022-9F2BS, NBU 1022-9C1CS & NBU 1022-9G1CS
LOCATED IN SECTION 9, T10S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 12
DRAWN: TL	DATE: 18 Nov 2013	12 OF 16
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9G\NBU 1022-9G_C.mxd11/22/2013 2:00:40 PM

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9G PAD
Well: NBU 1022-9G1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51978.2snT
Dip Angle: 65.77°
Date: 1/3/2014
Model: BGGM2013

WELL DETAILS: NBU 1022-9G1CS

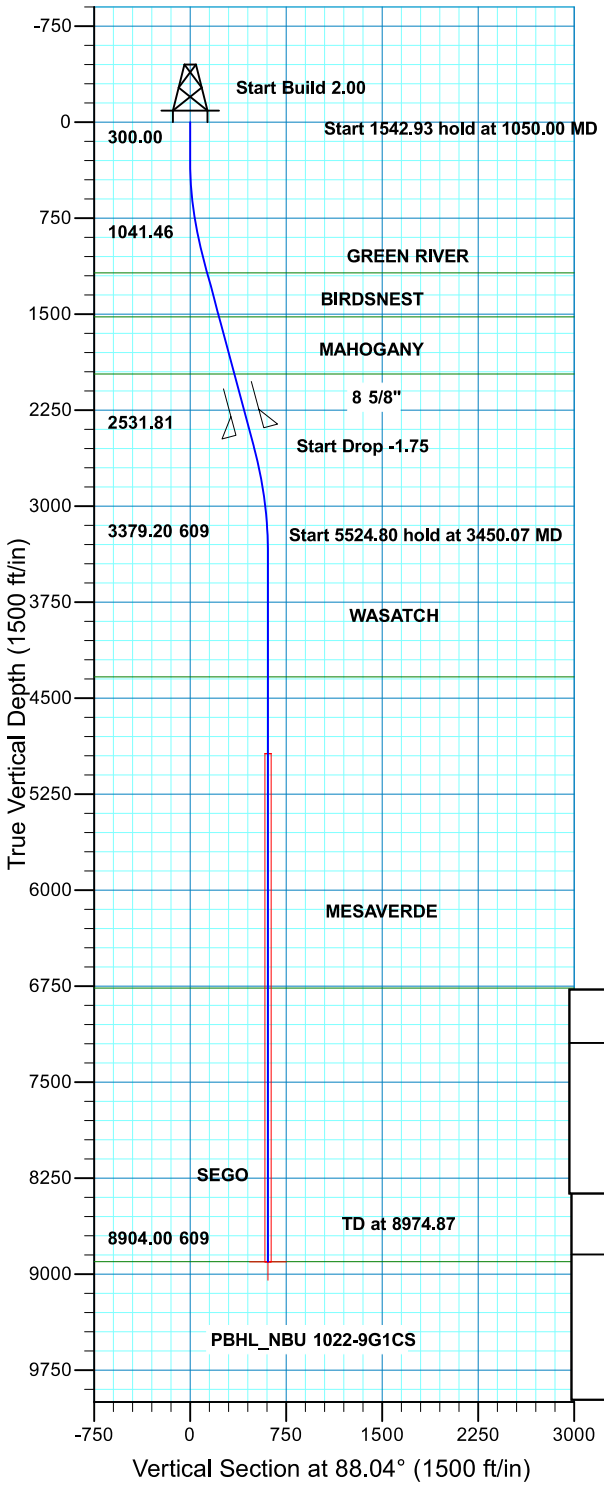
GL 5228 & KB 4 @ 5232.00ft (ASSUMED)

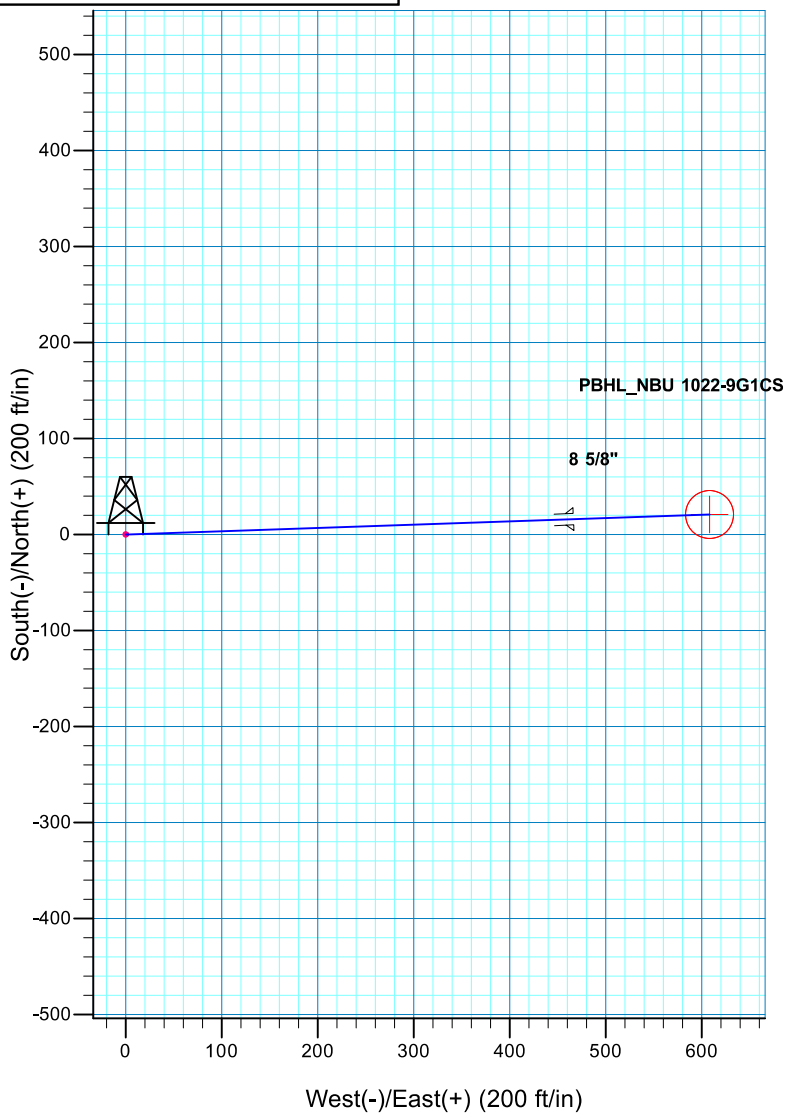
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14517526.49	2076724.42	39.9661480	-109.4428850

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8904.00	20.77	608.16	14517557.87	2077332.12	39.9662050	-109.4407150	Circle (Radius: 25.00)

- plan hits target center





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
1050.00	15.00	88.04	1041.46	3.33	97.56	2.00	88.04	97.62
2592.93	15.00	88.04	2531.81	16.96	496.66	0.00	0.00	496.95
3450.07	0.00	0.00	3379.20	20.77	608.16	1.75	180.00	608.51
8974.87	0.00	0.00	8904.00	20.77	608.16	0.00	0.00	608.51

PBHL_NBU 1022-9G1CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	
1178.00	1191.35	GREEN RIVER	
1521.00	1546.45	BIRDSNEST	
1969.00	2010.26	MAHOGANY	
4334.00	4404.87	WASATCH	
6766.00	6836.87	MESAVERDE	
8903.99	8974.86	SEGO	0.00

Plan: PLAN #1 PRELIMINARY (NBU 1022-9G1CS/OH)
Created By: Robert Scott Date: 12:28, January 06 2014

RECEIVED: July 02, 2014

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9G PAD
Well: NBU 1022-9C1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

T M

Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51978.2snT
Dip Angle: 65.77°
Date: 1/3/2014
Model: BGGM2013

WELL DETAILS: NBU 1022-9C1CS

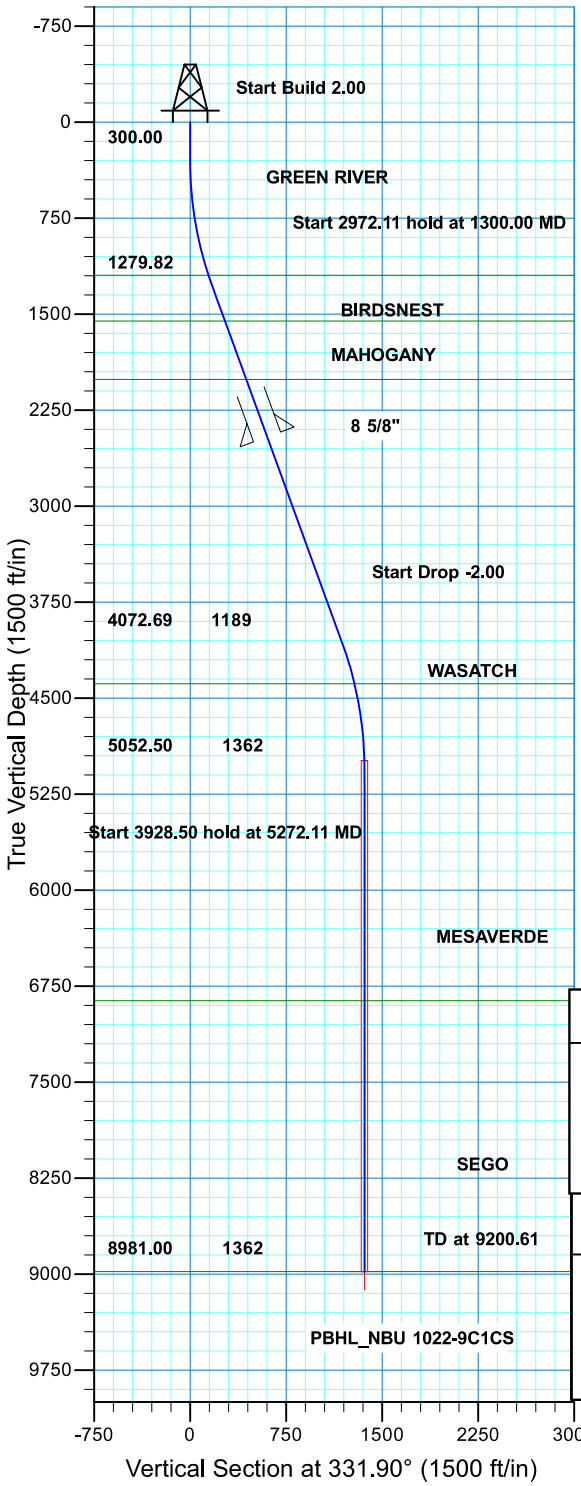
GL 5228 & KB 4 @ 5232.00ft (ASSUMED)

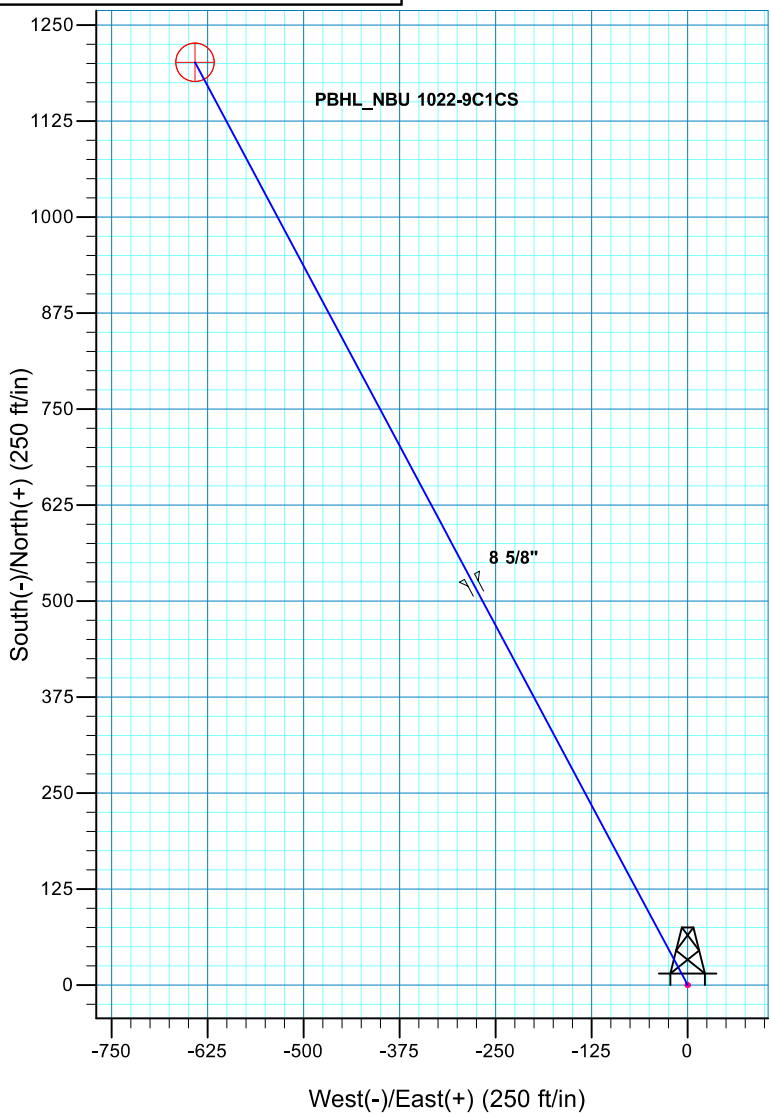
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14517524.49	2076714.36	39.9661430	-109.4429210

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8981.00	1201.54	-641.48	14518714.65	2076052.01	39.9694420	-109.4452100	Circle (Radius: 25.00)

- plan hits target center





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
1300.00	20.00	331.90	1279.82	152.41	-81.37	2.00	331.90	172.77
4272.11	20.00	331.90	4072.69	1049.14	-560.11	0.00	0.00	1189.29
5272.11	0.00	0.00	5052.50	1201.54	-641.48	2.00	180.00	1362.06
9200.61	0.00	0.00	8981.00	1201.54	-641.48	0.00	0.00	1362.06

PBHL_NBU 1022-9C1CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1197.00	1212.34	GREEN RIVER
1554.00	1591.78	BIRDSNEST
2011.00	2078.11	MAHOGANY
4388.00	4601.50	WASATCH
6864.00	7083.61	MESAVERDE
8981.00	9200.61	SEGO

Plan: PLAN #1 PRELIMINARY (NBU 1022-9C1CS/OH)
Created By: Robert Scott Date: 12:22, January 06 2014

RECEIVED: July 02, 2014

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9G PAD
Well: NBU 1022-9F2BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 1022-9F2BS

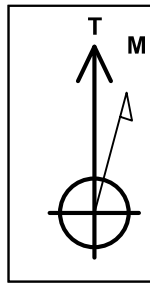
GL 5228 & KB 4 @ 5232.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14517522.86	2076704.58	39.9661390	-109.4429560

DESIGN TARGET DETAILS

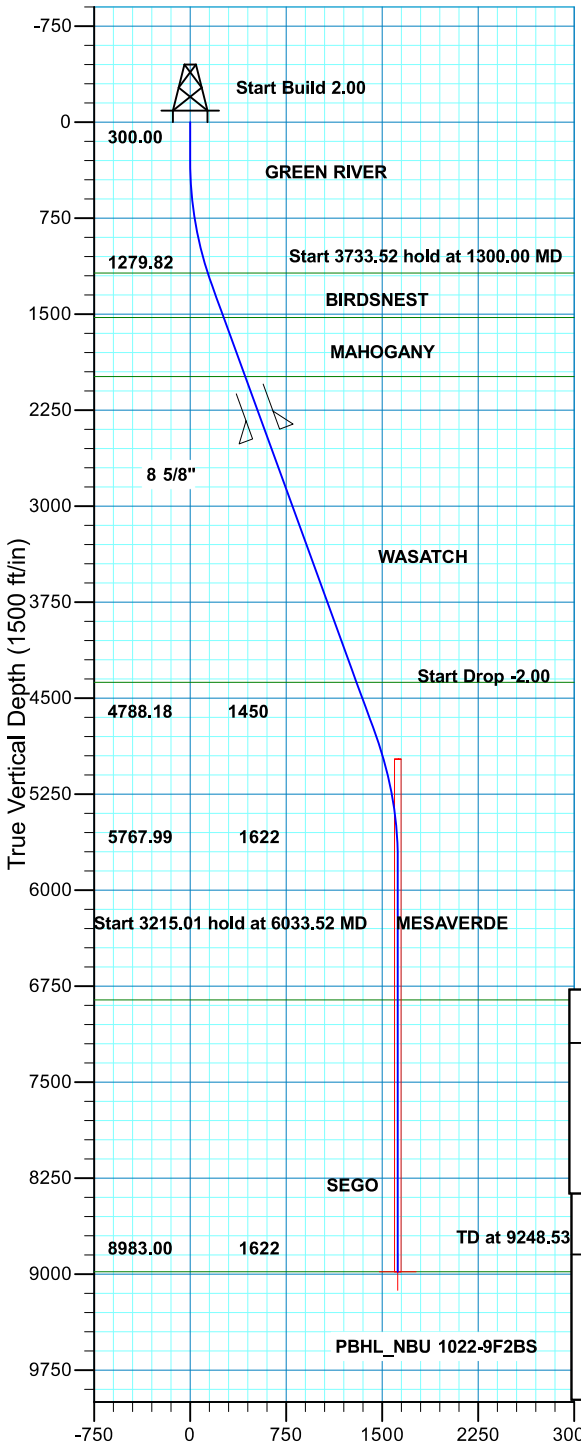
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8983.00	318.01	-1591.00	14517813.04	2075108.27	39.9670120	-109.4486330	Circle (Radius: 25.00)

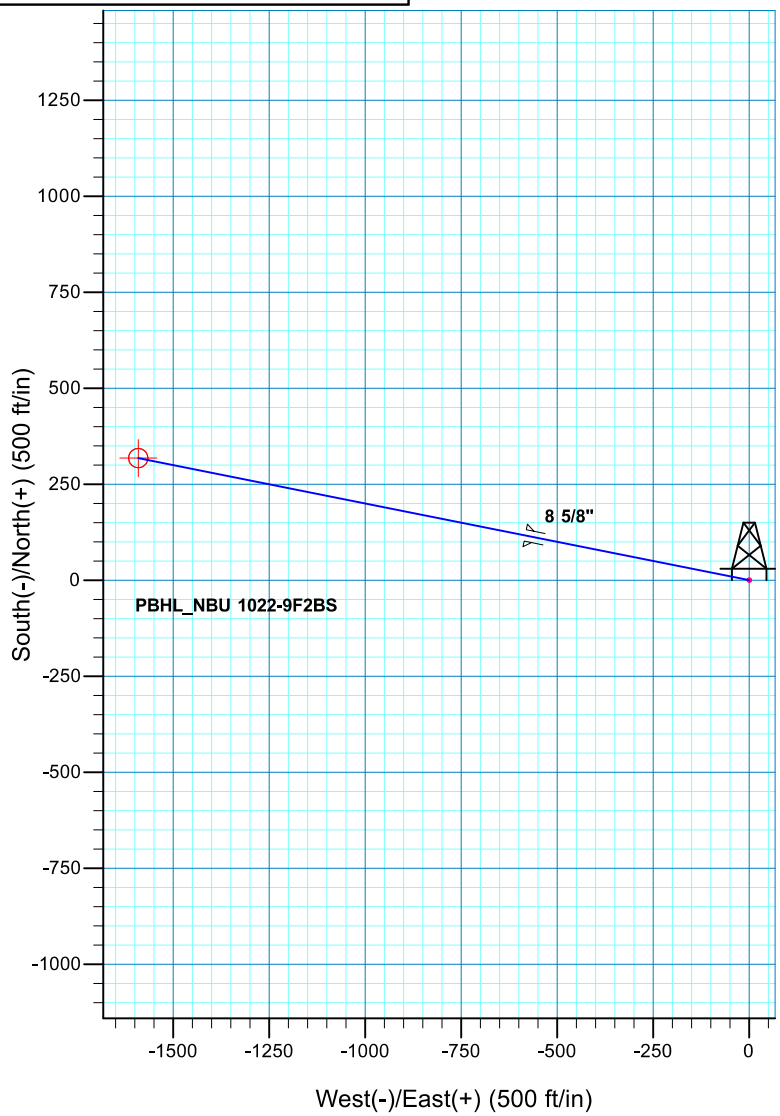
- plan hits target center



Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 51978.2snT
Dip Angle: 65.77°
Date: 1/3/2014
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
1300.00	20.00	281.30	1279.82	33.86	-169.42	2.00	281.30	172.77
5033.52	20.00	281.30	4788.18	284.15	-1421.59	0.00	0.00	1449.71
6033.52	0.00	0.00	5767.99	318.01	-1591.00	2.00	180.00	1622.47
9248.53	0.00	0.00	8983.00	318.01	-1591.00	0.00	0.00	1622.47

PBHL_NBU 1022-9F2BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

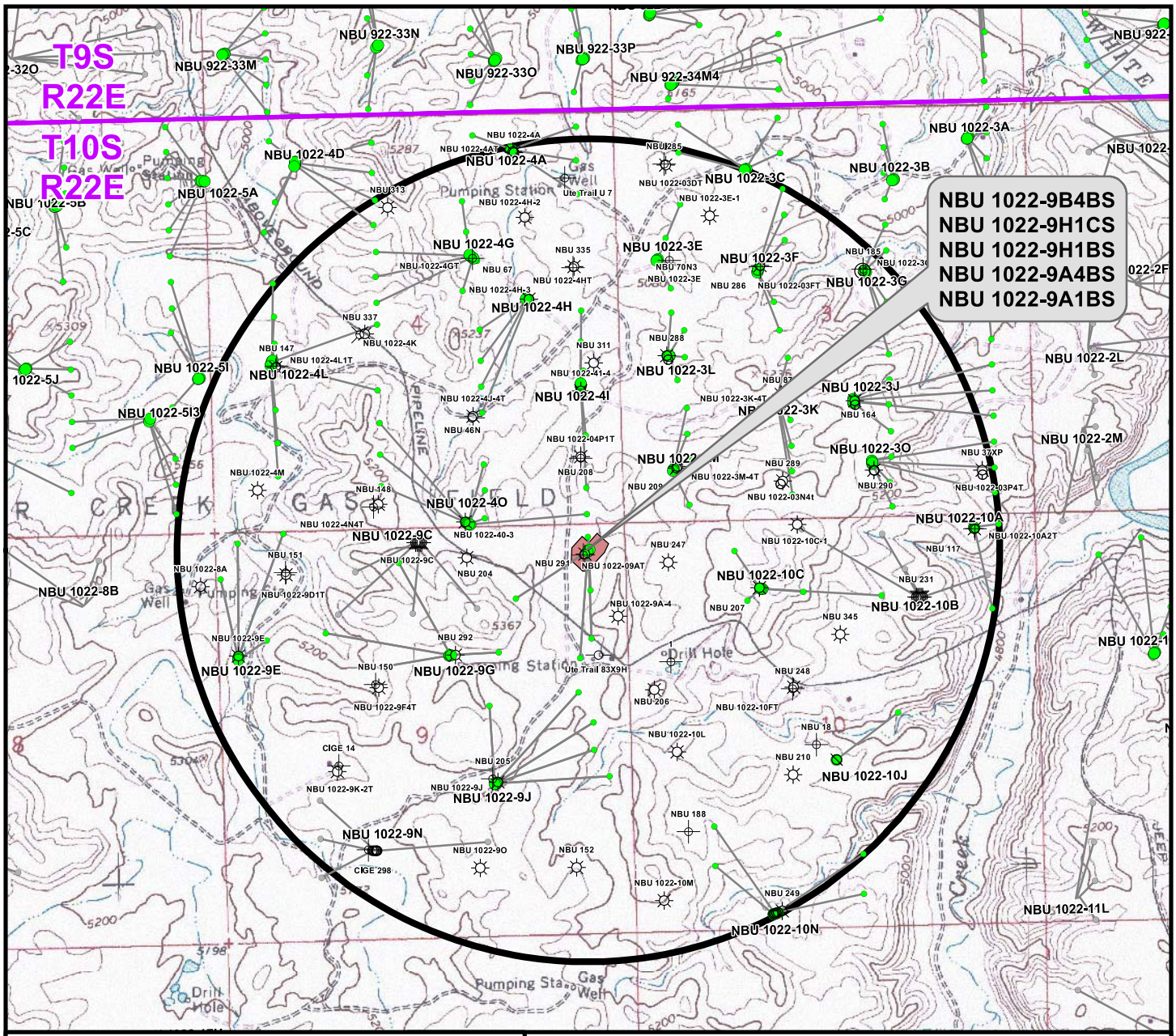
Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	
1179.00	1193.41	GREEN RIVER	
1528.00	1564.11	BIRDSNEST	
1988.00	2053.63	MAHOGANY	
4377.00	4595.95	WASATCH	
6859.00	7124.53	MESAVERDE	
8982.99	9248.52	SEGO	0.00

Plan: PLAN #1 PRELIMINARY (NBU 1022-9F2BS/OH)
Created By: Robert Scott Date: 12:26, January 06 2014

RECEIVED: July 02, 2014



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 1022-9B4BS	NBU 1022-9B4CS BH	±522ft
NBU 1022-9H1CS	Ute Trail 83X9H	±231ft
NBU 1022-9H1BS	Ute Trail 83X9H	±224ft
NBU 1022-9A4BS	NBU 291	±462ft
NBU 1022-9A1BS	NBU 1022-09AT	±227ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 1022-9A

TOPO C
NBU 1022-9B4BS,
NBU 1022-9H1CS, NBU 1022-9H1BS
NBU 1022-9A4BS & NBU 1022-9A1BS
LOCATED IN SECTION 9, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 13
DRAWN: TL	DATE: 18 Nov 2013	13 OF 17
REVISED:	DATE:	

K:\ANADARKO\2013\2013_55_NBU_1022-9_FOCUS\GIS\Maps_ABCDE\NBU 1022-9A\NBU 1022-9A_C.mxd 11/22/2013 10:59:50 AM

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 1022-9A PAD
Well: NBU 1022-9A4BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 1022-9A4BS

GL 5137 & KB 4 @ 5141.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14518868.96	2078502.65	39.9697480	-109.4364570

DESIGN TARGET DETAILS

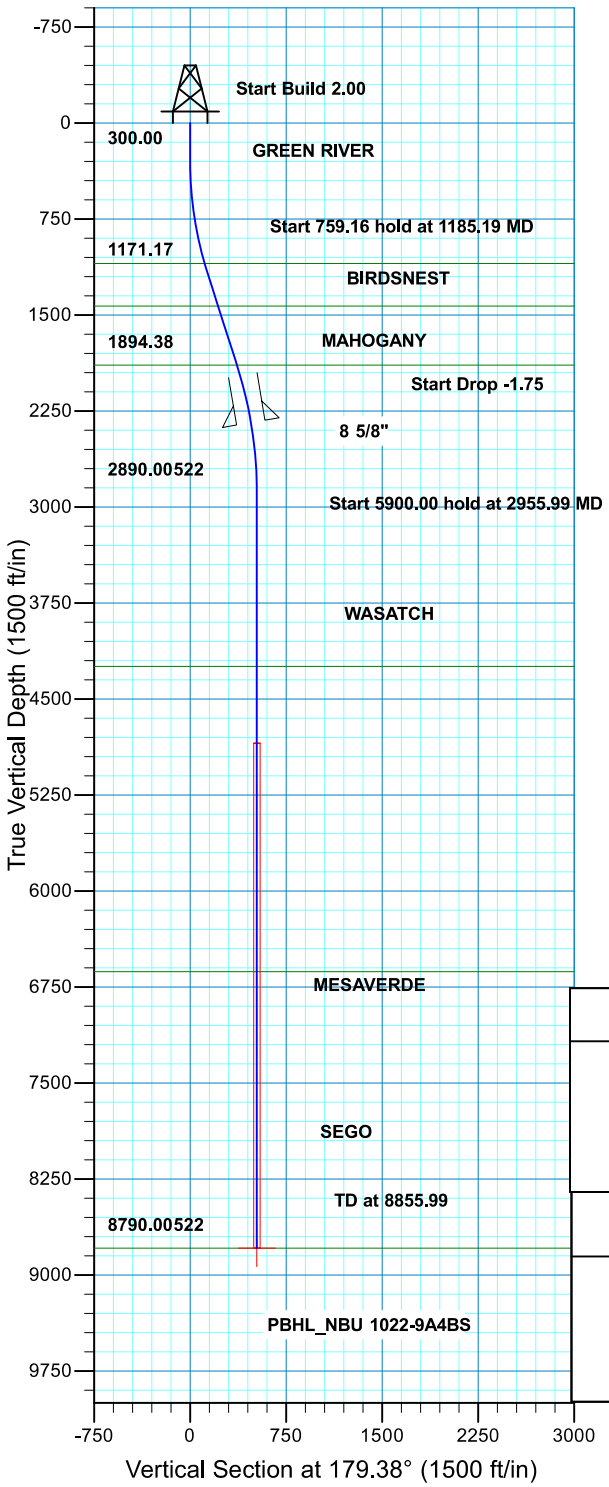
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8790.00	-521.55	5.32	14518347.59	2078517.12	39.9683160	-109.4364380	Circle (Radius: 25.00)

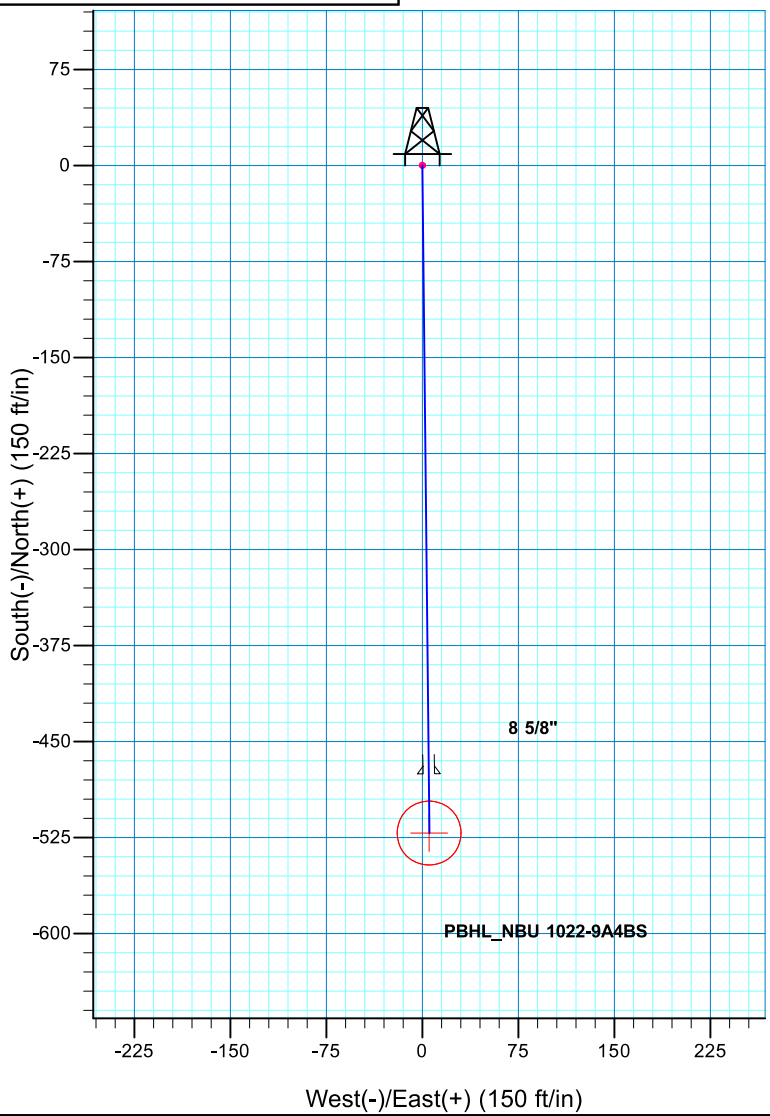
- plan misses target center by 0.28ft at 8855.99ft MD (8790.00 TVD, -521.55 N, 5.60 E)

T M

Azimuths to True North
Magnetic North: 10.72°

Magnetic Field
Strength: 52066.1snT
Dip Angle: 65.79°
Date: 1/3/2014
Model: IGRF2010





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1185.19	17.70	179.38	1171.17	-135.66	1.46	2.00	179.38	135.67	
1944.35	17.70	179.38	1894.38	-366.51	3.94	0.00	0.00	366.53	
2955.99	0.00	0.00	2890.00	-521.55	5.60	1.75	180.00	521.58	
8855.99	0.00	0.00	8790.00	-521.55	5.60	0.00	0.00	521.58	PBHL_NBU 1022-9A4BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

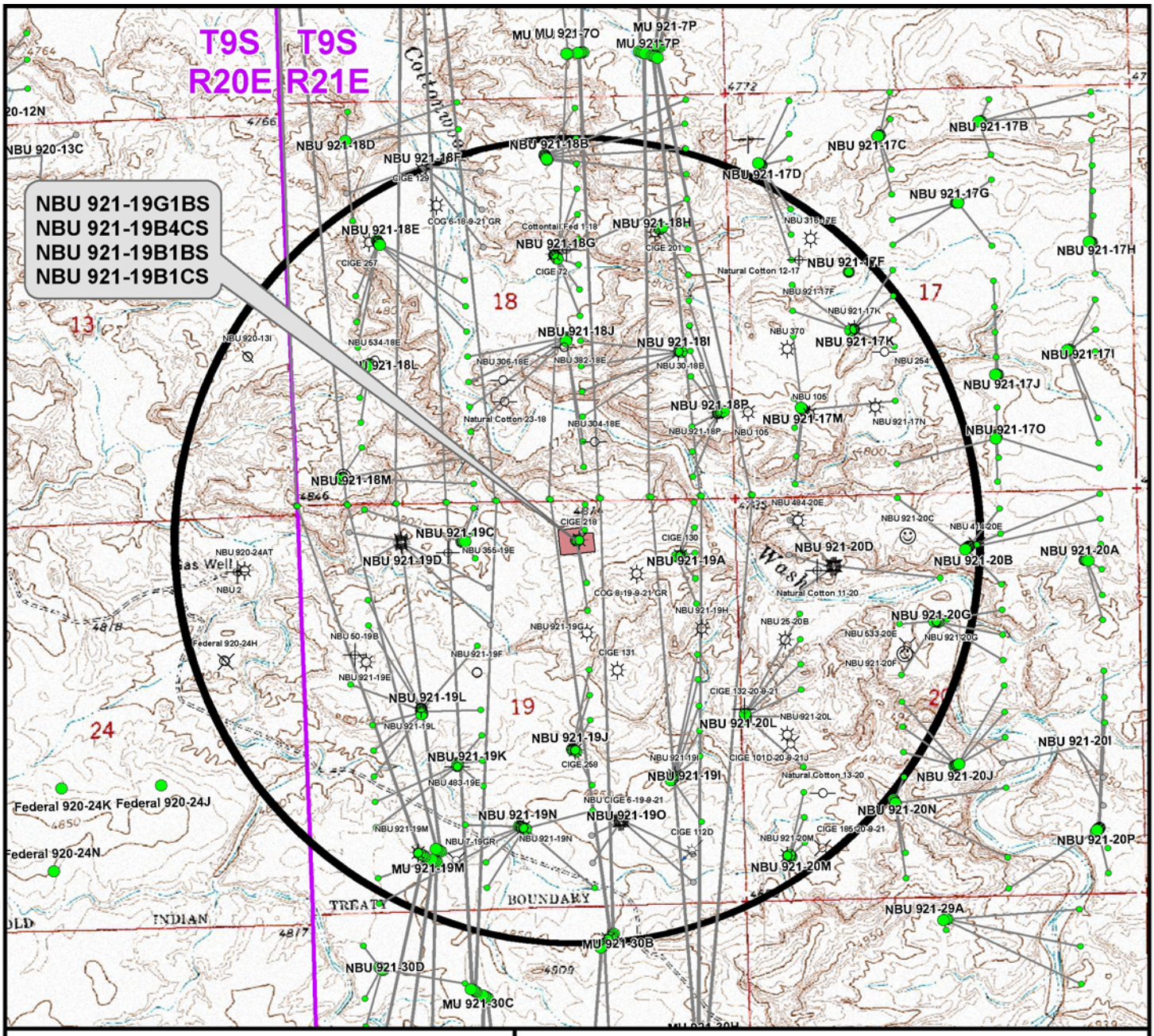
Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 9 T10S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1098.00	1108.70	GREEN RIVER
1432.00	1458.98	BIRDSNEST
1892.00	1941.85	MAHOGANY
4246.00	4311.99	WASATCH
6631.00	6696.99	MESAVERDE
8790.00	8855.99	SEGO

Plan: PLAN #1 PRELIMINARY (NBU 1022-9A4BS/OH)
Created By: Robert Scott Date: 11:56, January 06 2014

RECEIVED: July 01, 2014



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 921-19G1BS	NBU 921-18G	286ft
NBU 921-19B4CS	CIGE 218	565ft
NBU 921-19B1BS	CIGE 218	474ft
NBU 921-19B1CS	CIGE 218	146ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 921-19B

TOPO C
NBU 921-19G1BS, NBU 921-19B4CS, NBU 921-19B1BS & NBU 921-19B1CS
LOCATED IN SECTION 19, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO: 12
DRAWN: TL	DATE: 28 Sep 2012	12 OF 16
REVISED:	DATE:	

File: K:\ANADARKO\2012\2012_76_NBU_921-19-30_FOCUS\GIS\Maps_ABCDE\NBU 921-19B\NBU 921-19B_C.mxd 10/2/2012 2:30:56 PM

Received: July 08, 2014

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 921-19B PAD
Well: NBU 921-19B4CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 921-19B4CS

GL 4826 & KB 4 @ 4830.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14539126.55	2034658.31	40.0273684	-109.5917497

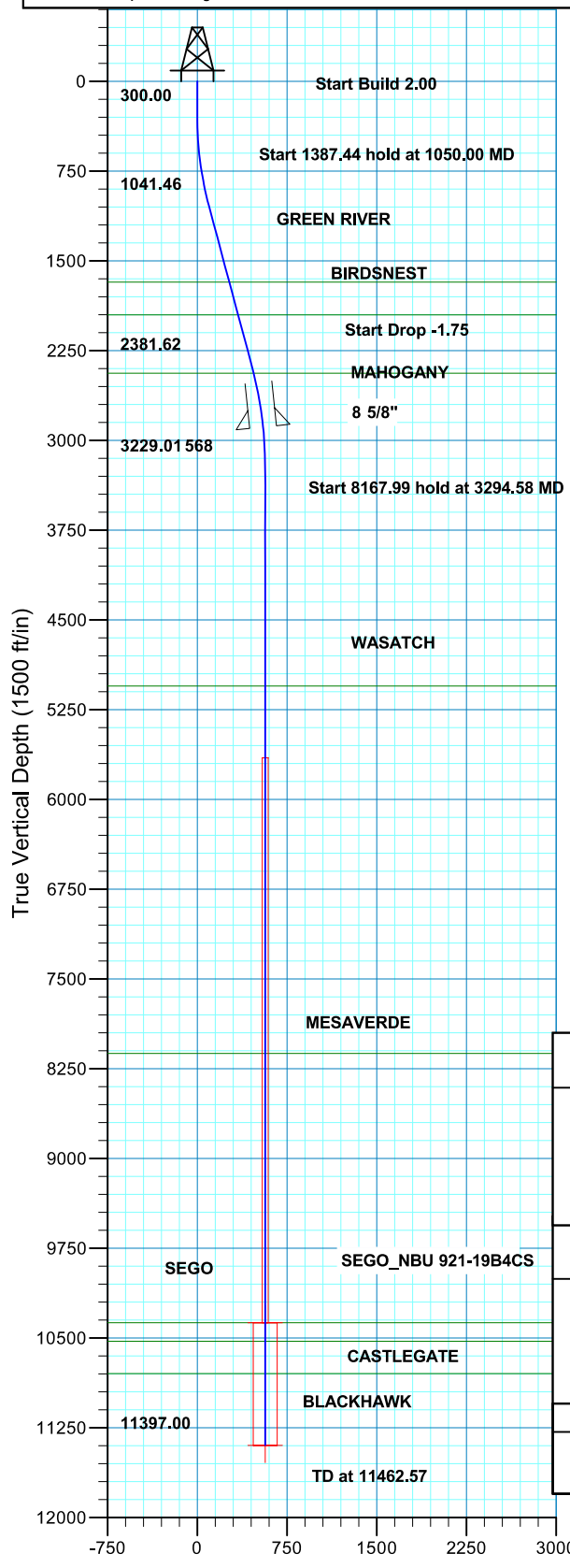
DESIGN TARGET DETAILS

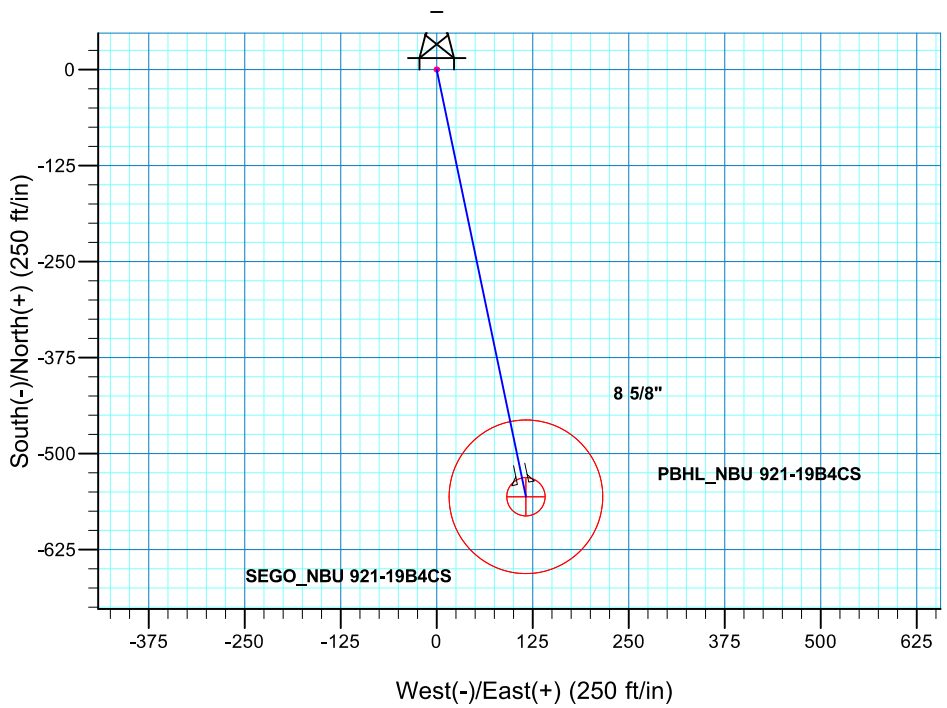
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	10373.00	-556.28	116.12	14538572.18	2034783.21	40.0258410	-109.5913350	Circle (Radius: 25.00)
- plan hits target center								
PBHL	11397.00	-556.28	116.12	14538572.18	2034783.21	40.0258410	-109.5913350	Circle (Radius: 100.00)
- plan hits target center								

T M

Azimuths to True North
Magnetic North: 10.89°

Magnetic Field
Strength: 52010.9snT
Dip Angle: 65.80°
Date: 2013/11/11
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1050.00	15.00	168.21	1041.46	-95.56	19.95	2.00	168.21	97.62	
2437.44	15.00	168.21	2381.62	-447.07	93.32	0.00	0.00	456.71	
3294.58	0.00	0.00	3229.01	-556.28	116.12	1.75	180.00	568.27	
11462.57	0.00	0.00	11397.00	-556.28	116.12	0.00	0.00	568.27	PBHL_NBU 921-19B4CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 19 T9S R21E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1677.00	1707.96	GREEN RIVER
1952.00	1992.66	BIRDSNEST
2439.00	2496.70	MAHOGANY
5053.00	5118.57	WASATCH
8123.00	8188.57	MESAVERDE
10373.00	10438.57	SEGO
10527.00	10592.57	CASTLEGATE
10797.00	10862.57	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2889.00	2953.96	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 921-19B4CS/OH)
Created By: Robert Scott Date: 10:10, November 13 2013

RECEIVED

Received: July 08, 2014

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 921-19B PAD
Well: NBU 921-19G1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 921-19G1BS

GL 4826 & KB 4 @ 4830.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14539125.67	2034648.52	40.0273664	-109.5917847

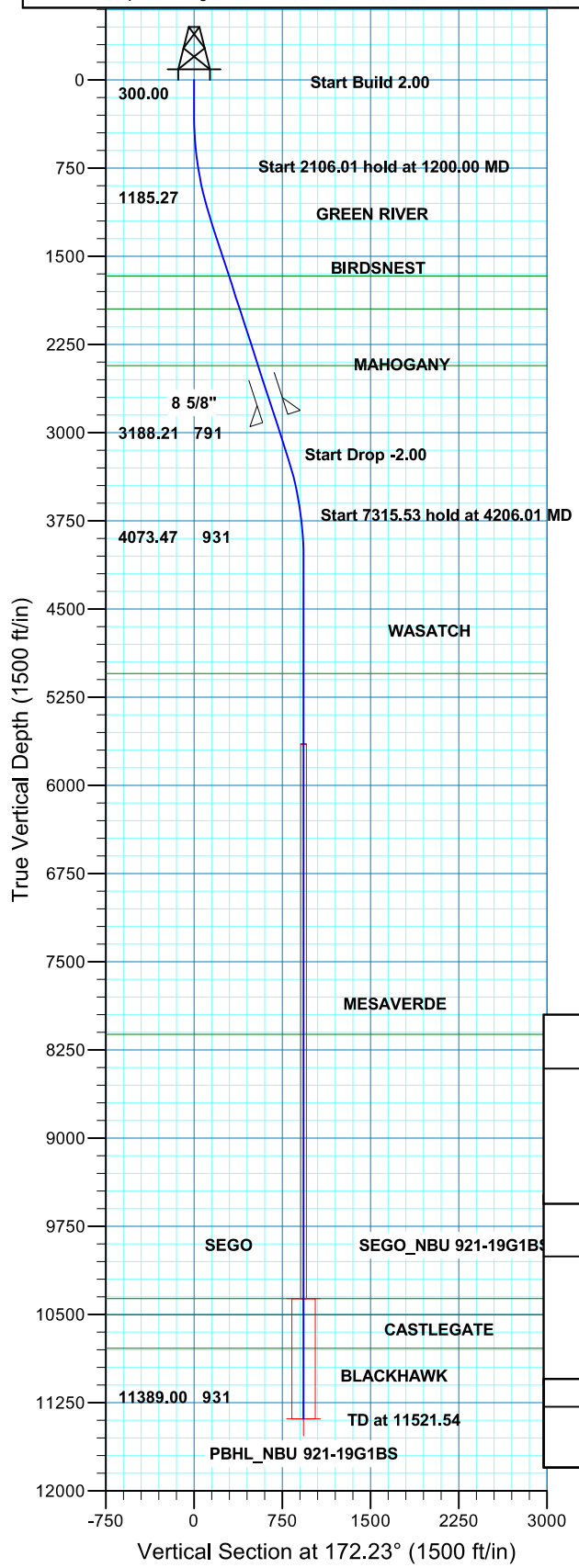
DESIGN TARGET DETAILS

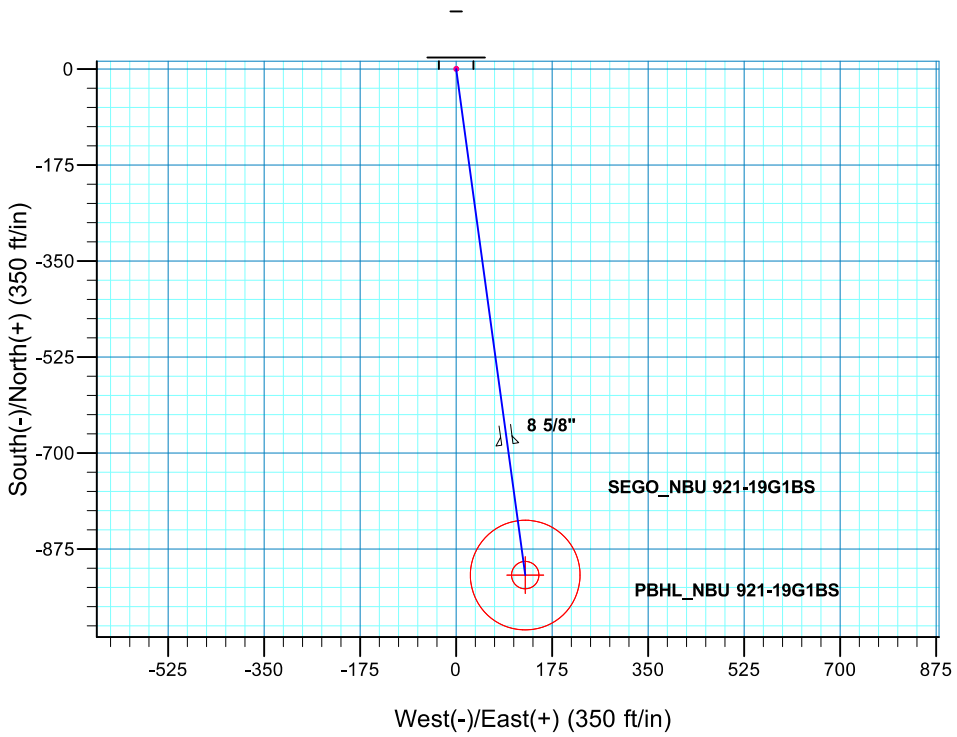
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	10365.00	-922.67	125.92	14538205.11	2034789.01	40.0248330	-109.5913350	Circle (Radius: 25.00)
- plan hits target center								
PBHL	11389.00	-922.67	125.92	14538205.11	2034789.01	40.0248330	-109.5913350	Circle (Radius: 100.00)
- plan hits target center								

T M

Azimuths to True North
Magnetic North: 10.89°

Magnetic Field
Strength: 52010.9snT
Dip Angle: 65.80°
Date: 2013/11/11
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1200.00	18.00	172.23	1185.27	-138.93	18.96	2.00	172.23	140.21	
3306.01	18.00	172.23	3188.21	-783.74	106.96	0.00	0.00	791.01	
4206.01	0.00	0.00	4073.47	-922.67	125.92	2.00	180.00	931.22	
11521.54	0.00	0.00	11389.00	-922.67	125.92	0.00	0.00	931.22	PBHL_NBU 921-19G1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 19 T9S R21E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1669.00	1708.63	GREEN RIVER
1948.00	2001.98	BIRDSNEST
2430.00	2508.79	MAHOGANY
5050.00	5182.54	WASATCH
8119.00	8251.54	MESAVERDE
10365.00	10497.54	SEGO
10503.00	10635.54	CASTLEGATE
10789.00	10921.54	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2880.00	2981.95	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 921-19G1BS/OH)
Created By: Robert Scott Date: 10:15, November 13 2013

Received: July 08, 2014

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 921-19B PAD
Well: NBU 921-19B1CS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

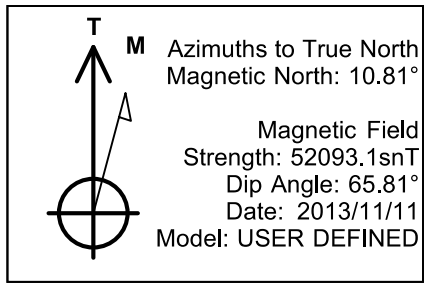
WELL DETAILS: NBU 921-19B1CS

GL 4826 & KB 4 @ 4830.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14539128.33	2034678.16	40.0273724	-109.5916787

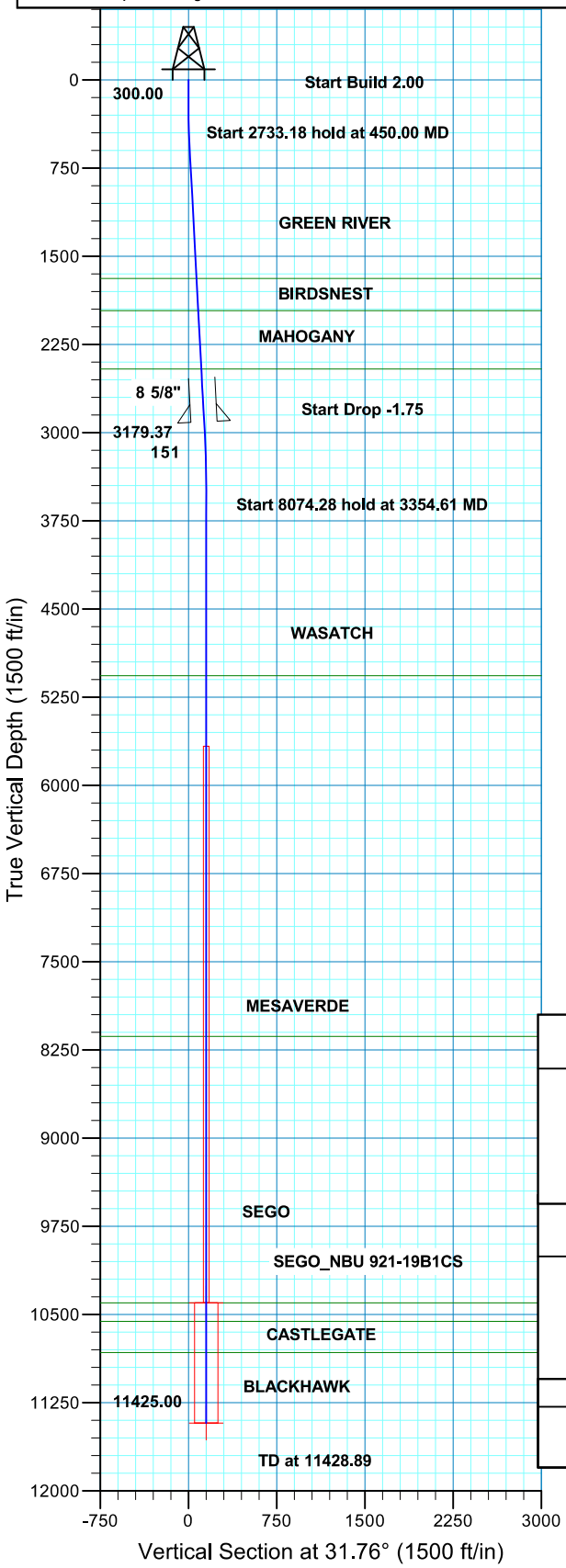
DESIGN TARGET DETAILS

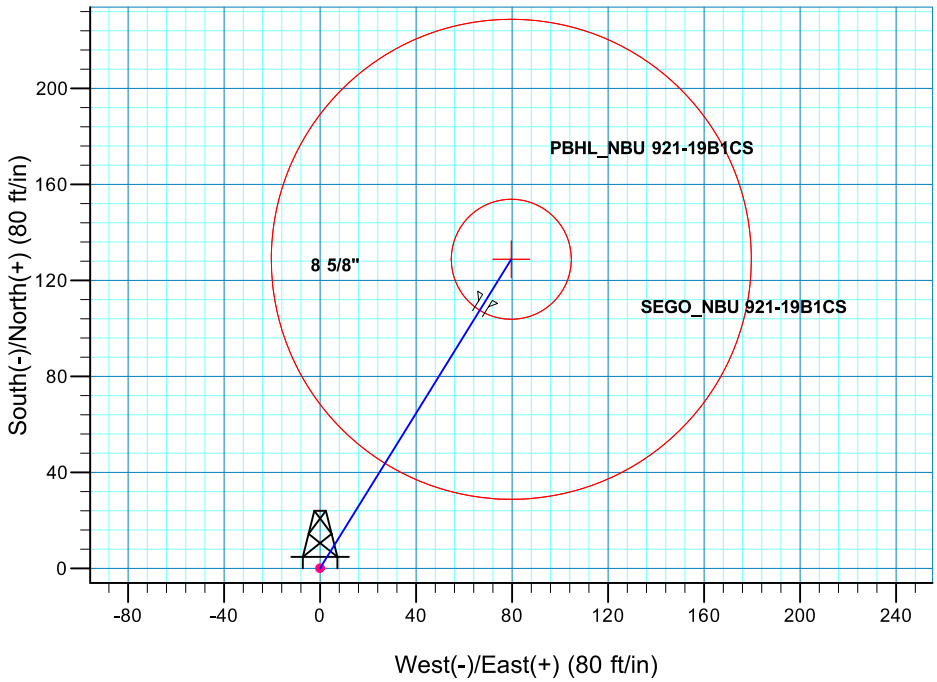
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	10401.00	128.78	79.71	14539258.35	2034755.83	40.0277260	-109.5913940	Circle (Radius: 25.00)
- plan hits target center								
PBHL	11425.00	128.78	79.71	14539258.35	2034755.83	40.0277260	-109.5913940	Circle (Radius: 100.00)
- plan hits target center								



Azimuths to True North
Magnetic North: 10.81°

Magnetic Field
Strength: 52093.1snT
Dip Angle: 65.81°
Date: 2013/11/11
Model: USER DEFINED





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
450.00	3.00	31.76	449.93	3.34	2.07	2.00	31.76	3.93	
3183.18	3.00	31.76	3179.37	124.97	77.35	0.00	0.00	146.97	
3354.61	0.00	0.00	3350.72	128.78	79.71	1.75	180.00	151.46	
11428.89	0.00	0.00	11425.00	128.78	79.71	0.00	0.00	151.46	PBHL_NBU 921-19B1CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 19 T9S R21E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1689.00	1690.77	GREEN RIVER
1962.00	1964.14	BIRDSNEST
2459.00	2461.83	MAHOGANY
5067.00	5070.89	WASATCH
8135.00	8138.89	MESAVERDE
10401.00	10404.89	SEGO
10559.00	10562.89	CASTLEGATE
10825.00	10828.89	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2909.00	2912.44	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 921-19B1CS/OH)
Created By: Robert Scott Date: 10:08, November 13 2013

RECEIVED

Received: July 08, 2014

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 921-19B PAD
Well: NBU 921-19B1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 921-19B1BS

GL 4826 & KB 4 @ 4830.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14539127.44	2034668.38	40.0273704	-109.5917137

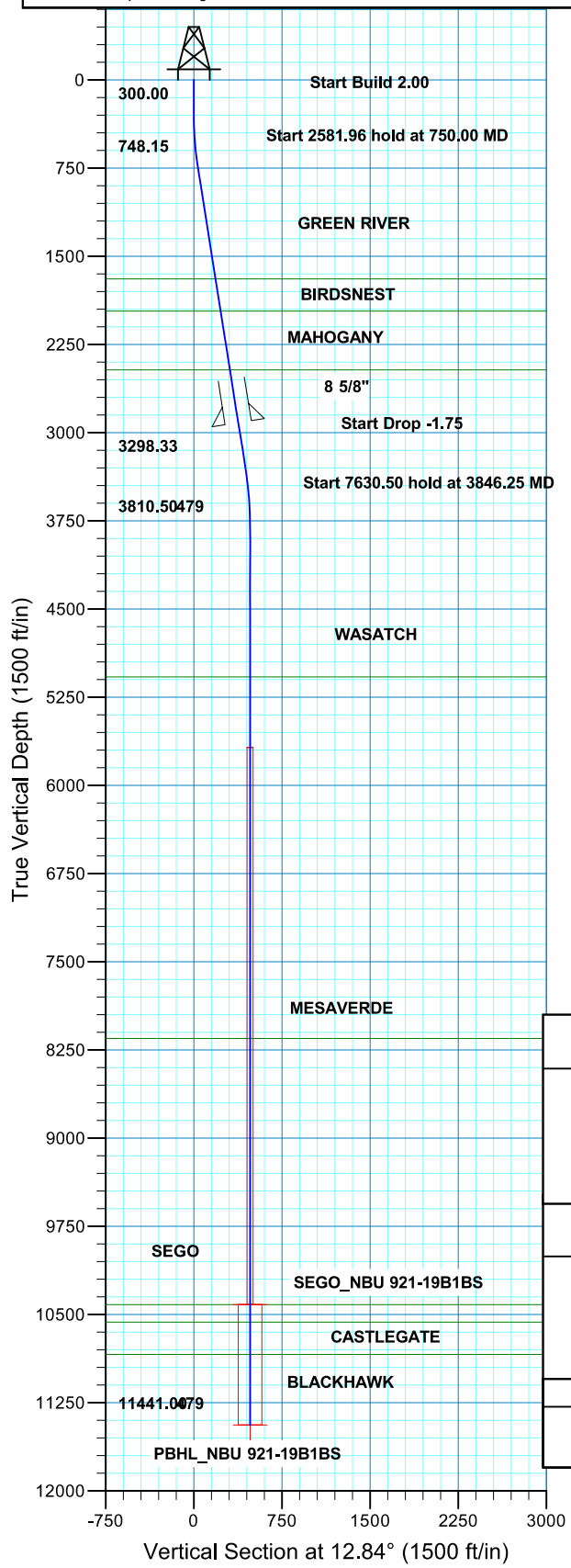
DESIGN TARGET DETAILS

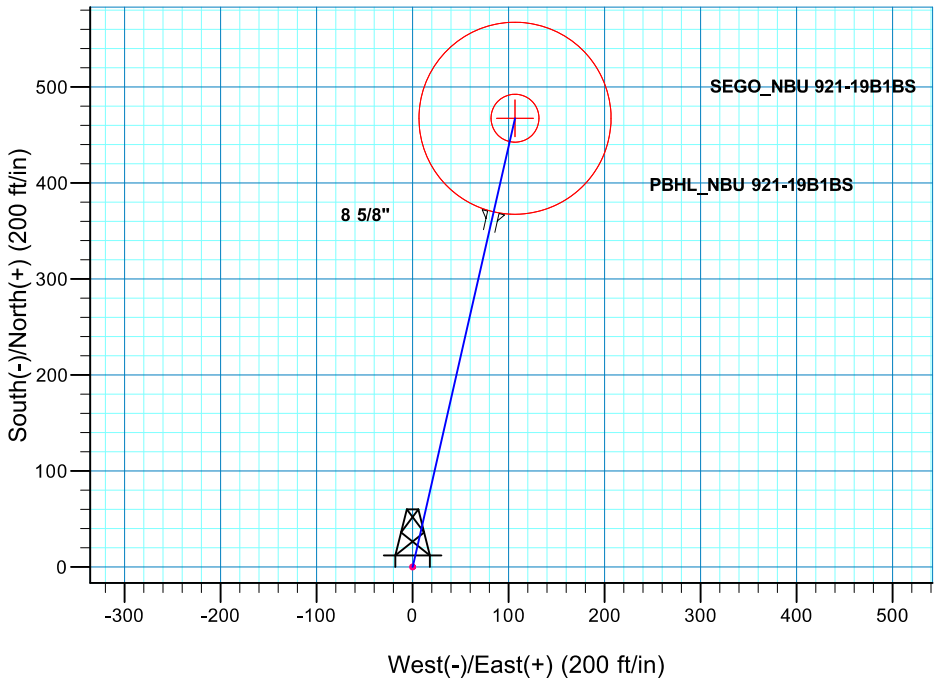
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	10416.00	467.49	106.59	14539596.56	2034767.57	40.0286540	-109.5913330	Circle (Radius: 25.00)
- plan hits target center								
PBHL	11441.00	467.49	106.59	14539596.56	2034767.57	40.0286540	-109.5913330	Circle (Radius: 100.00)
- plan hits target center								

T M

Azimuths to True North
Magnetic North: 10.89°

Magnetic Field
Strength: 52010.9snT
Dip Angle: 65.80°
Date: 2013/11/11
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
750.00	9.00	12.84	748.15	34.39	7.84	2.00	12.84	35.27	
3331.96	9.00	12.84	3298.33	428.19	97.63	0.00	0.00	439.18	
3846.25	0.00	0.00	3810.50	467.49	106.59	1.75	180.00	479.49	
11476.75	0.00	0.00	11441.00	467.49	106.59	0.00	0.00	479.49	PBHL_NBU 921-19B1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 19 T9S R21E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

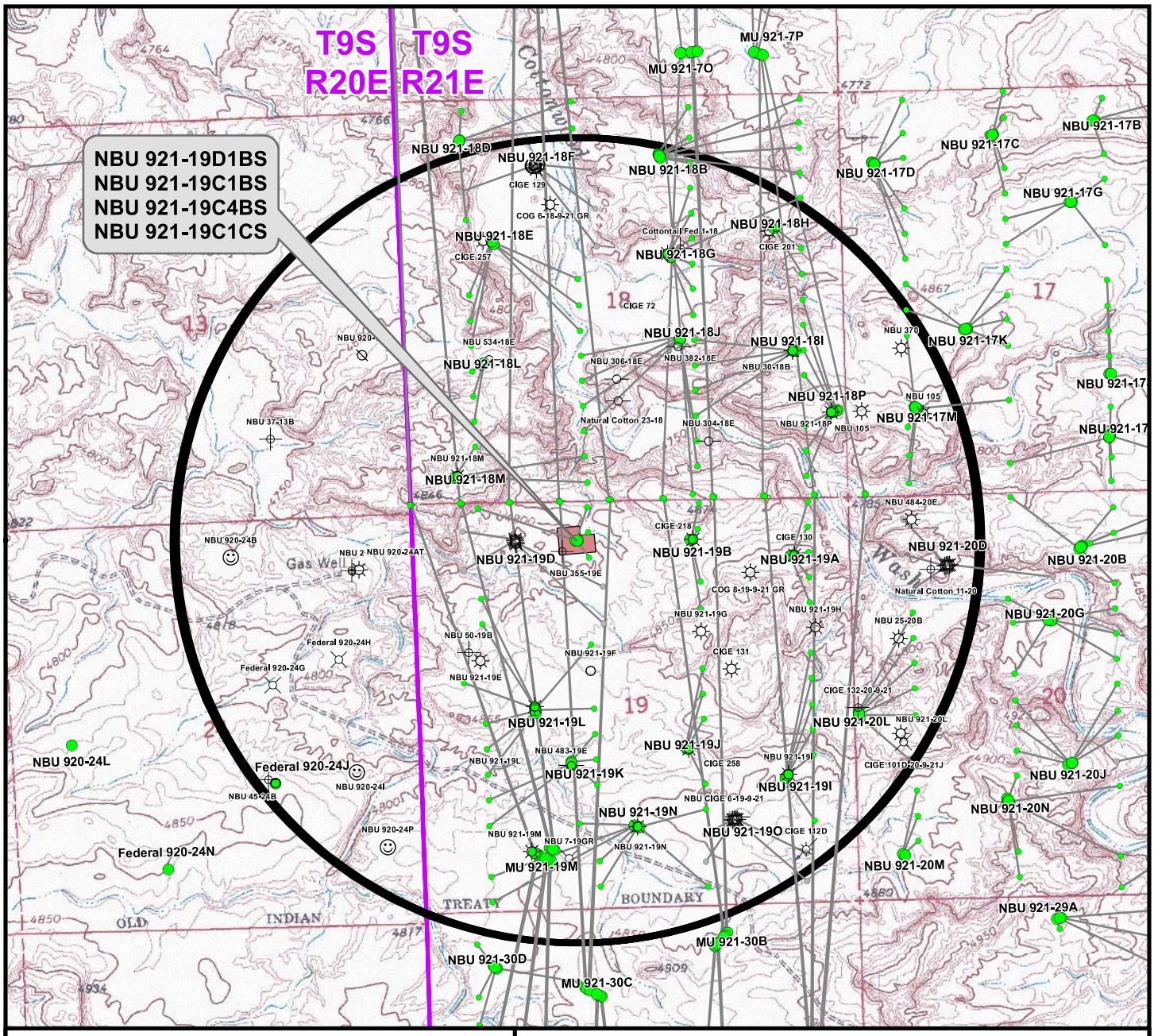
TVDPath	MDPath	Formation
1693.00	1706.63	GREEN RIVER
1967.00	1984.04	BIRDSNEST
2467.00	2490.27	MAHOGANY
5078.00	5113.75	WASATCH
8153.00	8188.75	MESAVERDE
10416.00	10451.75	SEGO
10565.00	10600.75	CASTLEGATE
10841.00	10876.75	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2917.00	2945.88	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 921-19B1BS/OH)
Created By: Robert Scott Date: 10:05, November 13 2013

API Well Number: 43047545860000



Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 921-19D1BS	NBU 921-19D2DS BH	363ft
NBU 921-19C1BS	NBU 355-19E	667ft
NBU 921-19C4BS	NBU 355-19E	360ft
NBU 921-19C1CS	NBU 355-19E	422ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- Producing
- Spudded
- APD Approved
- Preliminary Location
- Deferred
- Cancelled
- Temporarily Abandoned
- Active Injector
- Location Abandoned
- Plugged & Abandoned
- Shut-In

WELL PAD - NBU 921-19C

TOPO C
NBU 921-19D1BS, NBU 921-19C1BS, NBU 921-19C4BS & NBU 921-19C1CS
LOCATED IN SECTION 19, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
Denver, Colorado 80202

609 CONSULTING, LLC
2155 North Main Street
Sheridan, Wyoming 82801
Phone 307-674-0609
Fax 307-674-0182

N

SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO:	12
DRAWN: TL	DATE: 28 Sep 2012		12 OF 16
REVISED: TL	DATE: 17 Dec 2013		

File: K:\ANADARKO\2012\2012_76_NBU_921-19-30_FOCUS\GIS\Maps_ABCDE\NBU 921-19C\NBU 921-19C_C.mxd, 10/2/2012 1:50:02 PM

API Well Number: 43047545860000

Scientific Drilling

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: NBU 921-19C PAD
Well: NBU 921-19C1BS
Wellbore: OH
Design: PLAN #1 PRELIMINARY

Anadarko Petroleum Corporation

WELL DETAILS: NBU 921-19C1BS

GL 4795 & KB 4 @ 4799.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14539119.65	2033158.91	40.0274144	-109.5971045

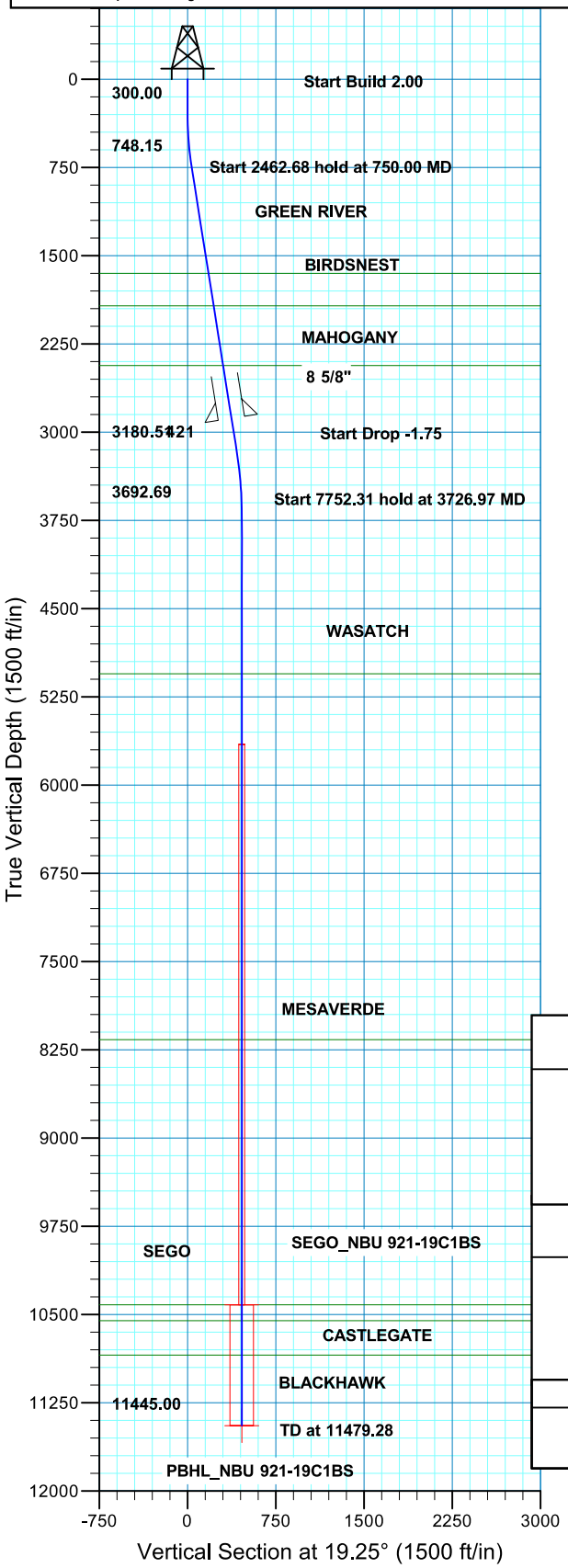
DESIGN TARGET DETAILS

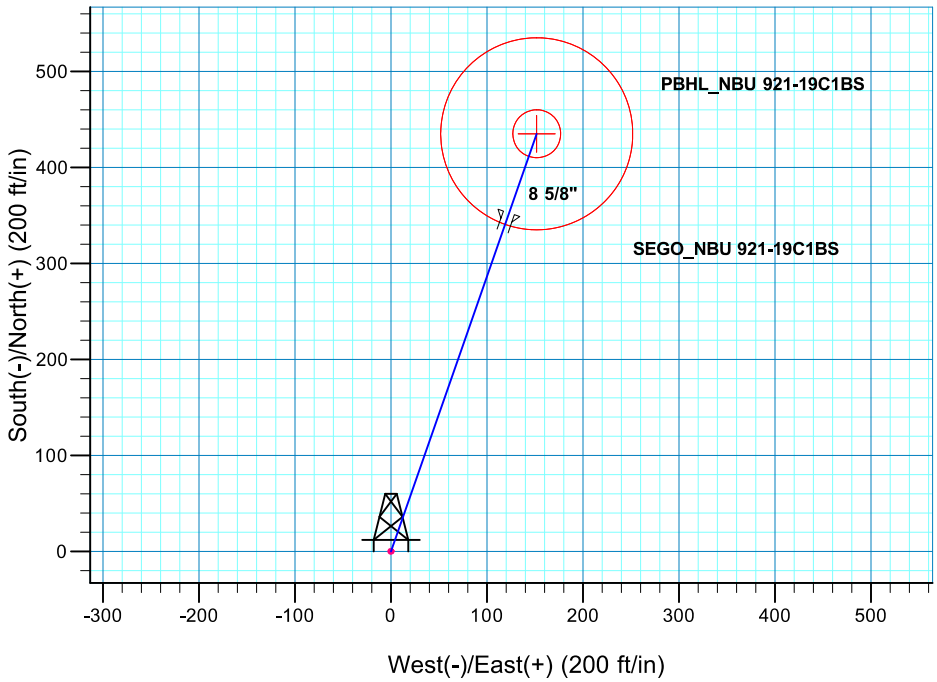
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	10418.00	435.07	151.90	14539557.06	2033303.93	40.0286090	-109.5965620	Circle (Radius: 25.00)
- plan hits target center								
PBHL	11445.00	435.07	151.90	14539557.06	2033303.93	40.0286090	-109.5965620	Circle (Radius: 100.00)
- plan hits target center								

T M

Azimuths to True North
Magnetic North: 10.89°

Magnetic Field
Strength: 52010.4snT
Dip Angle: 65.80°
Date: 2013/11/11
Model: BGGM2013





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
750.00	9.00	19.25	748.15	33.30	11.63	2.00	19.25	35.27	
3212.68	9.00	19.25	3180.51	397.02	138.61	0.00	0.00	420.52	
3726.97	0.00	0.00	3692.69	435.07	151.90	1.75	180.00	460.83	
11479.28	0.00	0.00	11445.00	435.07	151.90	0.00	0.00	460.83	PBHL_NBU 921-19C1BS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 19 T9S R21E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1651.00	1664.10	GREEN RIVER
1926.00	1942.53	BIRDSNEST
2433.00	2455.85	MAHOGANY
5054.00	5088.28	WASATCH
8163.00	8197.28	MESAVERDE
10418.00	10452.28	SEGO
10553.00	10587.28	CASTLEGATE
10845.00	10879.28	BLACKHAWK

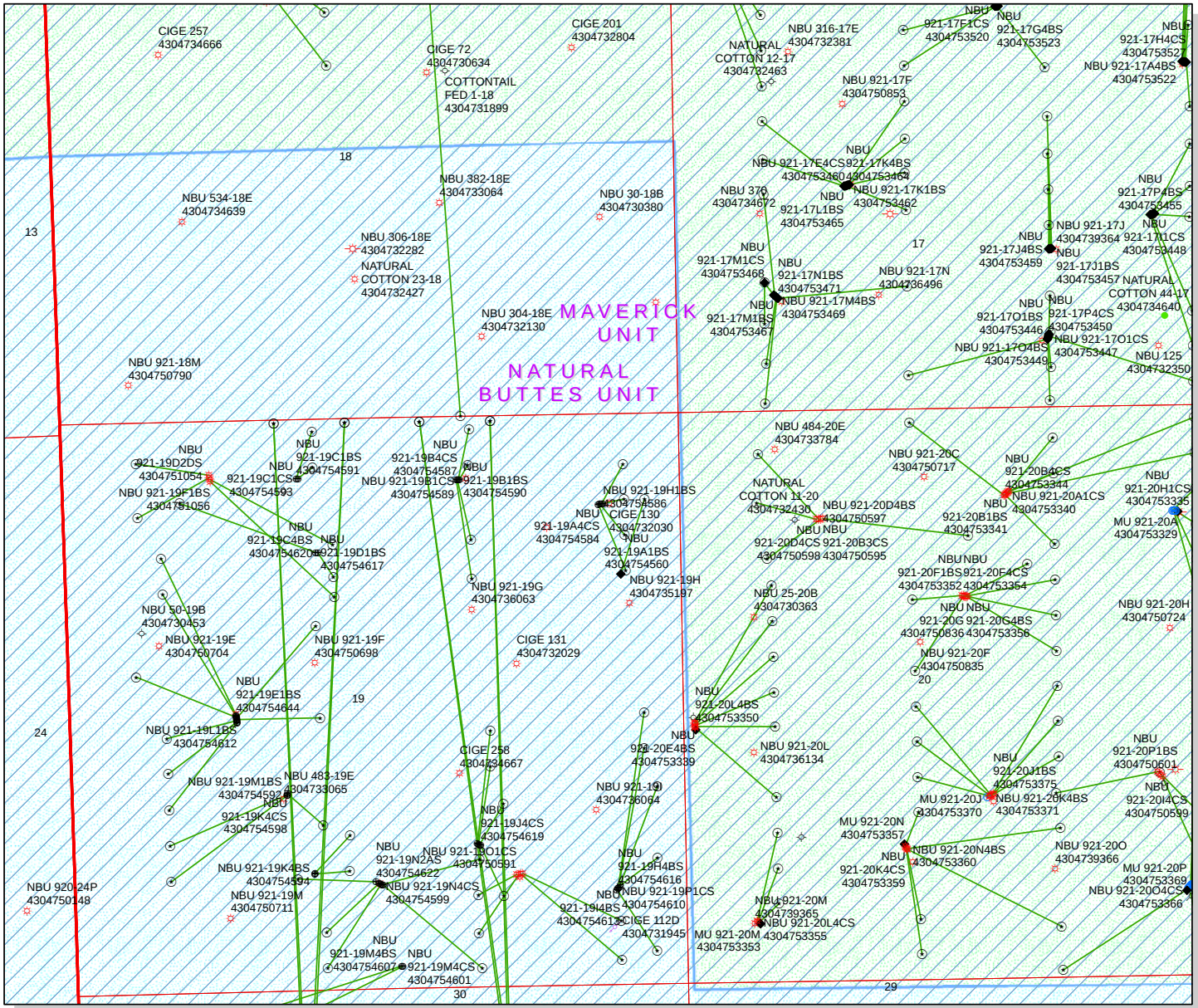
CASING DETAILS

TVD	MD	Name	Size
2883.00	2911.46	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 921-19C1BS/OH)
Created By: Robert Scott Date: 10:26:43 November 13 2013

RECEIVED: July 08, 2014

API Well Number: 43047545860000



API Number: 4304754586

Well Name: NBU 921-19H1BS

Township: T09.0S Range: R21.0E Section: 19 Meridian: S

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared: 7/23/2014
Map Produced by Diana Mason

Wells Query

Status

- APD - Aproved Permit
- DRL - Spuded (Drilling Commenced)
- GIW - Gas Injection
- GS - Gas Storage
- LOC - New Location
- OPS - Operation Suspended
- PA - Plugged Abandoned
- PGW - Producing Gas Well
- POW - Producing Oil Well
- SGW - Shut-in Gas Well
- SOW - Shut-in Oil Well
- TA - Temp. Abandoned
- TW - Test Well
- WDW - Water Disposal
- WIW - Water Injection Well
- WSW - Water Supply Well

Units

STATUS

- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Fields

STATUS

- Unknown
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- STORAGE
- TERMINATED

1,200 600 0 1,200 Feet

1:11,512

RECEIVED: July 23, 2014

API Well Number: 43047545860000

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 7/10/2014 **API NO. ASSIGNED:** 43047545860000

WELL NAME: NBU 921-19H1BS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6828

CONTACT: Joel Malefyt

PROPOSED LOCATION: NENE 19 090S 210E **Permit Tech Review:** ☑

SURFACE: 0789 FNL 0771 FEL **Engineering Review:** ☑

BOTTOM: 1408 FNL 0533 FEL **Geology Review:** ☑

COUNTY: UINTAH

LATITUDE: 40.02653 **LONGITUDE:** -109.58773

UTM SURF EASTINGS: 620506.00 **NORTHINGS:** 4431657.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU 0581 **PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE

SURFACE OWNER: 2 - Indian **COALBED METHANE:** NO

RECEIVED AND/OR REVIEWED:

- ☑ **PLAT**
- ☑ **Bond:** FEDERAL - WYB000291
- ☐ **Potash**
- ☑ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ☑ **Water Permit:** 43-8496
- ☐ **RDCC Review:**
- ☐ **Fee Surface Agreement**
- ☑ **Intent to Commingle**

Commingling Approved

LOCATION AND SITING:

- ☐ **R649-2-3.**

Unit: NATURAL BUTTES

- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ☑ **Drilling Unit**

Board Cause No: Cause 173-14

Effective Date: 12/2/1999

Siting: Suspends General Siting

- ☑ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations:
3 - Commingling - ddoucet
4 - Federal Approval - dmason
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason

RECEIVED: August 04, 2014

GARY R. HERBERT
Governor
SPENCER J. COX
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

Permit To Drill
****

Well Name: NBU 921-19H1BS
API Well Number: 43047545860000
Lease Number: UTU 0581
Surface Owner: INDIAN
Approval Date: 8/4/2014

Issued to:
KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:
Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:
This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingle:
In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

General:
Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:
State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil

shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Notification Requirements:
The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well - contact Carol Daniels at 801-538-5284
  (please leave a voicemail message if not available)
  OR
  submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website
  at http://oilgas.ogm.utah.gov

Reporting Requirements:
All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) - due within 5 days of spudding the well
- Monthly Status Report (Form 9) - due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) - due prior to implementation
- Written Notice of Emergency Changes (Form 9) - due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) - due prior to implementation
- Report of Water Encountered (Form 7) - due within 30 days after completion
- Well Completion Report (Form 8) - due within 30 days after completion or plugging

Approved By:

For John Rogers
Associate Director, Oil & Gas

RECEIVED
JAN 0 2 2014
BLM Vernal UT

Form 3160-3
(August 2007)

FORM APPROVED
OMB No. 1004-0136
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
UTU0581

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
UTU63047A

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.
NBU 921-19H1BS

2. Name of Operator
KERR MCGEE OIL & GAS LP
Contact: CARA MAHLER
E-Mail: cara.mahler@anadarko.com

9. API Well No.
43 047 54586

3a. Address
PO BOX 173779
DENVER, CO 80202-3779

3b. Phone No. (include area code)
Ph: 720-929-6029
Fx: 720-929-7029

10. Field and Pool, or Exploratory
NATURAL BUTTES

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface NENE 789FNL 771FEL 40.026671 N Lat, 109.587779 W Lon

At proposed prod. zone SENE 1408FNL 533FEL 40.024973 N Lat, 109.586925 W Lon

11. Sec., T., R., M., or Blk. and Survey or Area
Sec 19 T9S R21E Mer SLB

14. Distance in miles and direction from nearest town or post office*
APPROXIMATELY 48.1 MILES SOUTH OF VERNAL

12. County or Parish
UINTAH

13. State
UT

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
533

16. No. of Acres in Lease
2399.60

17. Spacing Unit dedicated to this well

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.
333

19. Proposed Depth
11482 MD
11412 TVD

20. BLM/BIA Bond No. on file
WYB000291

21. Elevations (Show whether DF, KB, RT, GL, etc.
4855 GL

22. Approximate date work will start
06/01/2014

23. Estimated duration
60-90 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature
(Electronic Submission)

Name (Printed/Typed)
CARA MAHLER Ph: 720-929-6029

Date
12/18/2013

Title
REGULATORY ANALYST

Approved by (Signature)

Name (Printed/Typed)
Jerry Kenczka

Date
AUG 05 2014

Title
Assistant Field Manager
Lands & Mineral Resources

Office
VERNAL FIELD OFFICE

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

CONDITIONS OF APPROVAL ATTACHED

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

Electronic Submission #229960 verified by the BLM Well Information System
For KERR MCGEE OIL & GAS LP, sent to the Vernal
Committed to AFMSS for processing by LESLIE BUHLER on 01/10/2014 ()

RECEIVED
AUG 11 2014
DIV. OF OIL, GAS & MINING

NOTICE OF APPROVAL

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

UDOGM

Additional Operator Remarks:

The following wells are on the NBU 921-19A Pad:

NBU 921-19A1BS
NBU 921-19A1CS
NBU 921-19A4BS
NBU 921-19A4CS
NBU 921-19H1BS

The filing fee for this well will be hand delivered or sent via overnight UPS delivery.

Please contact Cara Mahler at 720-929-6029, or via email at cara.mahler@anadarko.com with any questions, comments or concerns regarding this application.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE
170 South 500 East VERNAL, UT 84078 (435) 781-4400

CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:	**KERR MCGEE OIL & GAS ONSHORE LP**	**Location:**	**NENE SEC 19 T09S R21E**
Well No:	**NBU 921-19H1BS**	**Lease No:**	**UTU0581**
API No:	**43-047-54586**	**Agreement:**	**UTU63047A**

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	- Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	- Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	- Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to running casing and cementing all casing strings to: blm_ut_vn_opreport@blm.gov
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	- Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

SURFACE USE PROGRAM
CONDITIONS OF APPROVAL (COAs)

1. Paint facilities "Shadow Gray."

2. Conduct a raptor survey prior to construction operations if such activities will take place during raptor nesting season (January 1 through September 30). If active raptor nests are identified during the survey, operations willc be conducted according to the seasonal restrictions detailed in the Uinta Basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Guidelines.

3. If construction and/or drilling operations have not been initiated prior to October 2, 2013, conduct a biological survey to determine the presence of Uinta Basin hookless cactus in accordance with the guidelines specified in the USFWS Rare Plant Conservation Measures and the BLM RMP ROD. KMG will implement commitments contained in the GNB BO.

4. Monitor construction activities with a permitted archaeologist. Utilize applicable erosion BMPs to protect fill slopes.

Generic COAs for all locations within the Greater Natural Buttes EIS (MAY 2012)

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO_x per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.

- All new and replacement internal combustion gas field engines of greater than 300 design-rated horsepower must not emit more than 1.0 gms of NO_x per horsepower-hour.

- A Class III archeological survey has been conducted on all federal and/or Indian Trust lands in the GNBPA. All personnel will refrain from collecting artifacts and from disturbing any significant cultural resources in the area. KMG will be responsible for informing all persons in the area who are associated with this Project that they may be subject to prosecution for knowingly disturbing historic or archaeological sites or for collecting artifacts. All vehicular traffic, personnel movement, construction, and restoration activities will be confined to the areas examined, as referenced in the archaeological report, and to the existing roadways and/or evaluated access routes. If historic or archaeological materials were to be uncovered during construction, KMG will immediately stop surface disturbing activities that might further disturb such materials and contact the appropriate Authorized Officer (AO).

- If blasting operations are scheduled to occur within 2 miles of an active gilsonite mine, the mine operator will be notified at least 48 hours prior to blasting to coordinate activities for mine worker safety.

- KMG will conduct a paleontological survey on all of its federal locations. All personnel will refrain from collecting fossils and from disturbing any significant fossil in the GNBPA.

- If paleontological materials were to be uncovered during construction, KMG will immediately stop construction and contact the appropriate AO. A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontological material before construction can continue.

- Damage to livestock and livestock facilities will be reported as quickly as possible to the BLM and affected livestock operators. Operators will develop and employ prevention measures to avoid damaging fences, gates, and cattleguards, including upgrading cattleguard gate widths and load-bearing requirements and fencing all open pits and cellars.

- If partial or complete removal of a fence cannot be avoided, the fence will be braced and tied off per the BLM guidance. Where the fence is crossed by a road, the fence will be braced and a cattleguard and gate installed per BLM guidance.

- Speed limits will be followed and signs will be erected in lambing/calving areas, shipping pastures, or adjacent to working corrals to warn vehicle operators. (April 1 to June 1)

- In accordance with the procedures described in its Pesticide/ Herbicide Use Plan, KMG will monitor for the growth of invasive species resulting from surface disturbance caused by Project activities and will control weeds caused by Project activities.

- KMG will use its best efforts to control noxious weeds along access road authorizations, pipeline route authorizations, well sites, or other proposed facilities by spraying or mechanical removal. A list of noxious weeds will be obtained from the BLM or the appropriate County Extension Office. On BLM-administered land, a Pesticide Use Proposal will be submitted and approved prior to the application of herbicides or other pesticides or possibly hazardous chemicals.

- KMG will conduct pre-disturbance weed inventories to identify locations of noxious and invasive weed species.

- A 1- or 2-year rest period or mechanical control will be required prior to reseeding on areas treated with herbicide spraying.

- An integrated weed management plan will be developed, and include the following components:
    - Surveying for special status plant species before treating an area,
    - Considering effects to special status species when designing herbicide treatment programs,
    - Using drift reduction agents to reduce the risk of drift hazard, and

  - Using selective herbicide and a wick to backpack sprayer to minimize risks to special plants.
- Dirt ramps will be built and maintained at an angle not to exceed 45 degrees every 150 to 200 feet along open pipeline trenches to reduce habitat fragmentation and increase accessibility of small animals (mammals, reptiles, amphibians) to adjacent habitats.

- On level or gently sloping ground (5 percent slope or less), surface pipelines (4 inches or greater in diameter) will be elevated a minimum of 6 inches above the ground to allow passage of small animals beneath the pipe. This ground clearance will be achieved by placing the pipeline on blocks at intervals of 150 or 200 feet or as appropriate.

- Bird Exclusion netting will be installed over reserve pits containing water that are left open for more than 30 days to reduce possibility of exposure to hazardous chemicals.

- KMG will install bird-excluding devices that prevent the perching and entry of migratory birds on or into its new fired vessel exhaust stacks.

DOWNHOLE PROGRAM
CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

1. Surface casing cement shall be brought to surface.

2. Production casing cement shall be brought 200' up and into the surface casing.

3. For the drilling of the surface hole section, operator is required to install an bowl diverter system or rotating head which is connected and discharges to an panic or choke blooie line. The surface hole section of the subject well is deeper then 2,000 ft.

4. Require useage of an modified 5m stack. The 5M BOPE (minimum) shall be a modified 5m BOPE stack to include a third (3) pipe ram and one (1) remote kill line.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**

- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.

- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.

- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.

- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.

- **Please submit an electronic copy of all other logs run on this well in CD (compact disc) format to the Vernal BLM Field Office. This submission will supersede the requirement for submittal of paper logs to the BLM.**

- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.

- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:

    - Operator name, address, and telephone number.

    - Well name and number.

    - Well location (¼¼, Sec., Twn, Rng, and P.M.).

- Date well was placed in a producing status (date of first production for which royalty will be paid).
- The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
- The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
- Unit agreement and/or participating area name and number, if applicable.
- Communitization agreement number, if applicable.

- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.

- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.

- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.

- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.

- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.

- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.

- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.

- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.

- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

Sundry Number: 58880 API Well Number: 43047545860000

FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL Gas Well	**5.LEASE DESIGNATION AND SERIAL NUMBER:** UTU 0581
	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
	8. WELL NAME and NUMBER: NBU 921-19H1BS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	**9. API NUMBER:** 43047545860000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 **PHONE NUMBER:** 720 929-6100 EXT	**9. FIELD and POOL or WILDCAT:** NATURAL BUTTES
4. LOCATION OF WELL **FOOTAGES AT SURFACE:** 0789 FNL 0771 FEL **QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NENE Section: 19 Township: 09.0S Range: 21.0E Meridian: S	**COUNTY:** UINTAH **STATE:** UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 12/15/2014	☐ ACIDIZE	✓ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

"KERR MCGEE REQUESTS AUTHORIZATION TO CHANGE THE WASATCH/MESAVERDE DRILLING PROGRAM FOR ALL OF THE PROPOSED WELLS IN 921-19. THE WASATCH/MESAVERDE DRILLING PROGRAM IN THIS SECTION WAS PERMITTED AS HCP-110 PRODUCTION CASING FROM SURFACE TO TD. THIS WILL CHANGE TO I-80 CASING FROM SURFACE - 5000' AND HCP-110 FROM 5000' - TD." THIS IS A COURTESTY COPY. THANK YOU.

Accepted by the Utah Division of Oil, Gas and Mining

Date: December 15, 2014

By: Dark K Quist

NAME (PLEASE PRINT) Kay E. Kelly **PHONE NUMBER** 720 929 6582	**TITLE** Regulatory Analyst
SIGNATURE N/A	**DATE** 12/15/2014

RECEIVED: Dec. 15, 2014

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 921-19H1BS

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047545860000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6100

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0789 FNL 0771 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 19 Township: 09.0S Range: 21.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 6/18/2015	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the Utah Division of Oil, Gas and Mining
June 23, 2015
Date:
By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jennifer Thomas	720 929-6808	Regulatory Specialist
SIGNATURE N/A		**DATE** 6/18/2015

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047545860000

API: 43047545860000
Well Name: NBU 921-19H1BS
Location: 0789 FNL 0771 FEL QTR NENE SEC 19 TWNP 090S RNG 210E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 8/4/2014

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- **If located on private land, has the ownership changed, if so, has the surface agreement been updated?** ○ **Yes** ◉ **No**
- **Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?** ○ **Yes** ◉ **No**
- **Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?** ○ **Yes** ◉ **No**
- **Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?** ○ **Yes** ◉ **No**
- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

Signature: Jennifer Thomas **Date:** 6/18/2015
Title: Regulatory Specialist **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED: Jun. 18, 2015

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 921-19H1BS

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047545860000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6454

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0789 FNL 0771 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 19 Township: 09.0S Range: 21.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 6/24/2016	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the Utah Division of Oil, Gas and Mining
June 27, 2016
Date:
By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Joel Malefyt	720 929-6828	Regualtory Analyst
SIGNATURE N/A		**DATE** 6/24/2016

RECEIVED: Jun. 24, 2016

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047545860000

API: 43047545860000
Well Name: NBU 921-19H1BS
Location: 0789 FNL 0771 FEL QTR NENE SEC 19 TWNP 090S RNG 210E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 8/4/2014

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- **If located on private land, has the ownership changed, if so, has the surface agreement been updated?** ○ **Yes** ◉ **No**
- **Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?** ○ **Yes** ◉ **No**
- **Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?** ○ **Yes** ◉ **No**
- **Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?** ○ **Yes** ◉ **No**
- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

Signature: Joel Malefyt **Date:** 6/24/2016
Title: Regualtory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED: Jun. 24, 2016

RECEIVED

JUN 23 2016

BLM VERNAL UTAH

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
UTU0581

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
UTU63047A

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
NBU 921-19H1BS

2. Name of Operator
KERR MCGEE OIL & GAS ONSHORE

Contact: JOEL MALEFYT
E-Mail: JOEL.MALEFYT@ANADARKO.COM

9. API Well No.
43-047-54586

3a. Address
1368 SOUTH1200 EAST
VERNAL, UT 84078

3b. Phone No. (include area code)
Ph: 720-929-6828

10. Field and Pool, or Exploratory
GREATER NATURAL BUTTES

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 19 T9S R21E Mer SLB NENE 789FNL 771FEL
40.026671 N Lat, 109.587779 W Lon

11. County or Parish, and State
UINTAH COUNTY, UT

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

A - 8/5/14
NJ - 2014-193 EA

CONDITIONS OF APPROVAL ATTACHED

RECEIVED
SEP 27 2016
DIV. OF OIL, GAS & MINING

VERNAL FIELD OFFICE
ENG. RHH 9/9/16
GEOL.
E.S.
PET.
A.M.

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #342964 verified by the BLM Well Information System
For KERR MCGEE OIL & GAS ONSHORE, sent to the Vernal
Committed to AFMSS for processing by C. BETH HAMANN on 06/23/2016 ()

Name *(Printed/Typed)* JOEL MALEFYT — Title REGULATORY ANALYST

Signature (Electronic Submission) — Date 06/23/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By — Title Assistant Field Manager Lands & Mineral Resources — Date SEP 19 2016

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office VERNAL FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

CONDITIONS OF APPROVAL ATTACHED

16CBH0247SE